

Development of a Hybrid Human-AI Personalised Learning Path for VET for Innovation in
Agriculture



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Module: The Role of Groups in Agriculture

Lesson/Unit/Topic Content Development

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UNIT 1: INTRODUCTION

Background to the AKIS (Agricultural Knowledge and Innovation System)

The AKIS refers to the **exchange of knowledge** between a number of **several different actors** from the **first second and third sector** of rural areas.

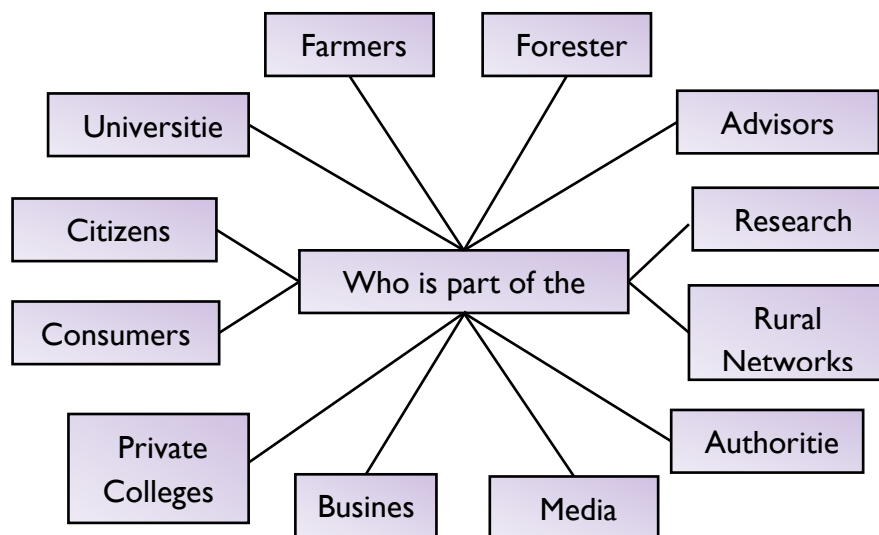
The AKIS is described as **“a system of innovation with emphasis on the actors involved as well as the links and interactions between them”** (Ref. 1)

The AKIS spans from local contacts for information sharing such as farmer to farmer to national and international connections between institutions in a knowledge sharing innovation system.

The AKIS ensures that knowledge can be shared between everyone who uses within the agricultural sector ranging from farmers to foresters and rural communities.

Advisory services are seen as one essential means to enhancing problem solving, information sharing and innovation generation. (Ref. 2)

The effective and efficient use of knowledge when shared between the AKIS stakeholders, including advisory services, farmers, consumers, authorities and educators, is critical for supporting innovative ideas and solutions that can be implemented in the sector (Ref. 3).



Examples of stakeholders in the AKIS include:

- Advisors, Consultants, Farmers and Farm organizations, Government agencies, Private sector actors such as input suppliers, technology companies, Universities, and research institutions (Ref. 4)

A functioning AKIS system is needed to provide innovative solutions and meet future challenges as well as supporting the development of innovative solutions that work in practice.



modern AKIS is a project funded by the EU which aims to create a more coherent, efficient and effective AKIS that will result in the modernization of the European Agri food sector.

With ever-changing conditions and increasing pressure on European farmers and consumers it is important that they have access to up-to-date and-quality research, knowledge and information, access to training and education, as well as facilitation and other support services. Some issues facing the sector that require a strong and rigid AKIS system to counteract include:

1. **Providing small-scale farmers with access to reliable and relevant knowledge.**
2. **Bridging scientific research topics and farmers demands.**
3. **Offering appropriate support for diverse rural actors that form networks around innovations in agriculture and rural areas (Ref. 5)**

AKIS Across European Countries

Massive variance in AKIS in different countries throughout Europe. A wide variety of **hybrid solutions between public extension and privatized systems.**

Europe has a **high level of diversity** integrated throughout its advisory system. Each country has implemented and developed a system that is **specific to its own situation, needs, and opportunities.**

Table 1: Overview of European AKIS Systems (Ref. 6)

| European Examples | |
|--|--|
| Netherlands & UK | <ul style="list-style-type: none">- Mainly privatized systems.- Funding comes from direct payments from farmers and couple with state funding for research. |
| France, Finland & some states in Germany | <ul style="list-style-type: none">- Co-management between farmer organizations and the state- Public funding, partial payments by farmers and farmer organizations. |
| Ireland | <ul style="list-style-type: none">- Semi-state management- E.g., Teagasc made up of representatives of the state, industry, and farm organizations |
| Switzerland, Italy & Finland | <ul style="list-style-type: none">- Management by the state through regional organizations or institutions. |



Figure 1: AKIS in Europe Source: EIP-AGRI (Ref. 3)

Activity: Please take the time to watch the following video outlining the flow of information throughout the AKIS across Europe (Ref. 6): Link in reference list.



Figure 2: European AKIS Source: EIP-AGRI (Ref. 3).



Figure 3: European AKIS Source EIP-ARGRI (Ref. 3).

Within Europe there is a mixture of centralized and decentralized AKIS systems, with the majority having a centralized system (Ref. 7).

AKIS ACTORS RESPONSIBLE FOR INNOVATION

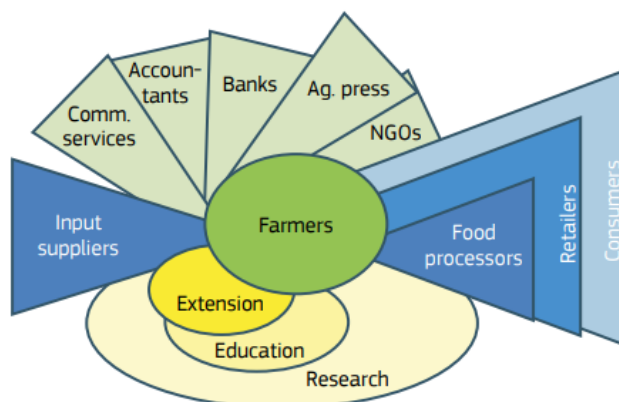


Figure 4: Overview of actors involved in innovation. Source: SCAR (2012) (Ref. 1).

Innovation is a **social process**. It begins with **mobilizing existing knowledge**. It is a **bottom up or interactive** process more so than top down from science to implementation.

Innovation is a **risky undertaking**. It **benefits from the exchange of ideas, learning and innovation networks have proven to be an adequate vehicle for empowering groups of farmers to investigate new options to make their business more viable or sustainable**. (Ref. 8). It is important that individuals are well linked into networks of knowledge and information. This results in **improved decision-making skills, creating new opportunities**.



Micro AKIS

The micro AKIS can be defined as the knowledge system that farmers personally assemble including the range of individuals and organizations from whom they seek services and exchange knowledge, the processes involved in the formation and working of the system, including the way farmers translate these resources into innovative activities (Ref. 9)

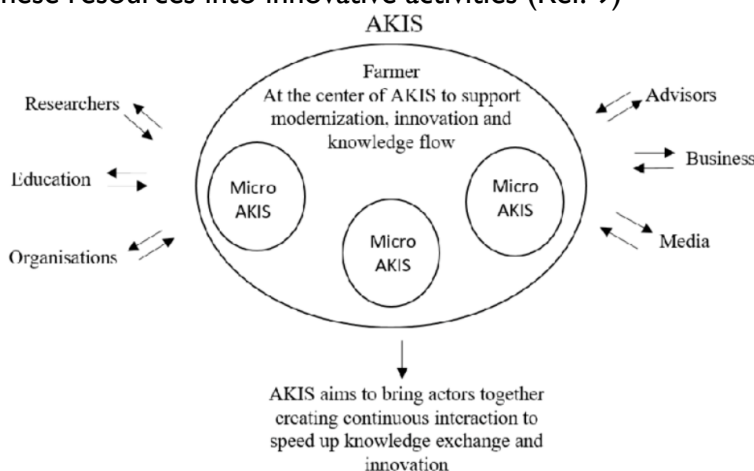


Figure 5: Outline of Micro AKIS Source: (Ref. 2)

The micro AKIS can be defined as the knowledge system that farmers personally assemble including the range of individuals and organizations from whom they **seek services and exchange knowledge**, the processes involved in then formation and working of the system, including the way farmers translate these resources into innovative activities. (Ref. 10)

MACRO AKIS

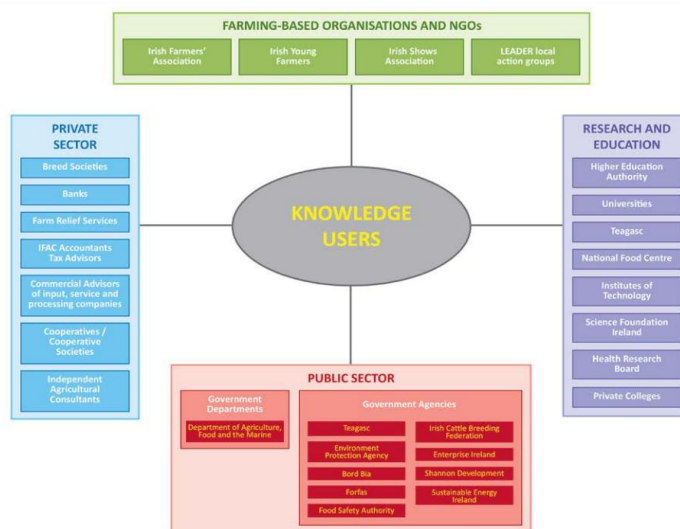


Figure 6: Outline of Macro AKIS Source: (Ref. 2)

When we view the above AKIS at a national level it is presented as a model that caters for all issues for all knowledge users. (Ref. 11)



UNIT 2: BACKGROUND TO AGRICULTURAL FACILITATION

Introduction

Facilitation is an important process in the context of group interactions. **Facilitation allows for the adequate transfer of information from one party to another.** Facilitation is a method of **overseeing/guiding** a group or team through a **debate or discussion** while **promoting and maintaining involvement from all group members.** Agricultural facilitation can be seen across the industry particularly in interactions between farmers and advisors in a farm discussion group. While agricultural facilitators do not typically provide solutions to discussion topics, they do however **provide a medium for solutions to be sought in a controlled environment,** while **avoiding group conflict** and providing a medium for all individuals to **voice their opinions** in a safe environment.

Activity: Please watch this short video outlining the role of facilitation in innovation. An example from New Zealand. <https://www.youtube.com/watch?v=6W1xVZlkgj0>

Facilitation Skillset

FACILITATION VS TEACHING

Table 2: Differences in Facilitation and Teaching.

| Facilitation | Teaching |
|---|---|
| <ol style="list-style-type: none"> 1. Topics for discussion identified by the group. 2. Several directions of information flow. 3. The individual responsible for facilitating the session aims to promote every person's opinion. | <ol style="list-style-type: none"> 1. Pre-arranged learning topics by the teacher. 2. One way information flows. 3. Correct answers only as opposed to opinions (Ref. 12). |

CHAIRING VS FACILITATING

Table 3: Differences in Chairing and Facilitating.

| Chairing | Facilitating |
|------------------------------|--|
| Agenda set | Agenda agreed |
| Makes decisions | Independent |
| Not part of team | Part of team |
| Telling | Asking |
| Ask questions to get answers | Ask questions to encourage critical thinking (Ref. 12) |



Approaches to Facilitation

SCREEN

1. **Simplicity** – Keep messages **clear, concise, and coherent**.
2. **Curiosity** – Get people **interested in change** as opposed to **forcing change** upon them.
3. **Relevance** – Link the points back to the farmers present. Get them thinking about how this is **relevant to their own scenarios**.
4. **Evidence** – **Back up scientific points with research**.
5. **Emotion** – Create a **link between the person and the research/data**.
6. **Narrative** – Tell previous **success and failure stories** (Ref. 13)

Quality Facilitation

High quality and focused facilitation has the potential to:

1. **Build trust** between people.
2. Influence **change**.
3. Build **confidence and self-belief**.
4. Put people at ease.
5. **Delivers** on agreed results (Ref. 14).

Individual Learning Styles

1. Visual Learners – Visual learning is often referred to as **spatial learning**. This type of learning occurs in people who learn by **observing things** such as **images, diagrams, and written instructions**. Integrating the use of **whiteboards and diagrams** throughout sessions is crucial in helping this type of learner.
2. Auditory Learners – Auditory learners learn best when the subject is **spoken aloud**. This type of learner typically prefers to **listen** to a speech or talk to learn rather than taking notes. The learner may **then speak to themselves to reinforce the new information in their heads**. Attributes of this learner include being **very good at explaining things** to other people.
3. Kinesthetic Learners – Kinesthetic learners are also known as **tactile learners**. They learn by **physically doing or experiencing** something. This learner will **act out scenarios to help them fully understand it**. Such learners will often **find it difficult to sit through a class**.
4. Reading and Writing Learners – These types of learners prefer to learn through reading and writing. This can include **reading articles and books before then taking their own notes**. This type of learner best fits the **traditional education system** (Ref. 15)



Facilitation Styles

1. **Directive** – Involves supplying people with information and explaining how to do something.
2. **Exploratory** - Involves asking questions and prompting people to share their opinions and previous experiences with the group.
3. **Delegating** – Involves assigning tasks to individuals particularly around organizational tasks.
4. **Participative** – Involves the facilitator taking part in the discussion sharing personal views and experiences (Ref. 16)

Agricultural Discussion Groups

Agricultural Discussion Groups provide farmers with the opportunity to **meet farmers** who have **similar interests and farming practices** as themselves. It allows farmers to **create a network** with **other like-minded farmers**. It is important to understand the phrase “Discussion Group”. Discussion refers to **examination by argument/debate** while investigating, challenging, and studying. Group refers to a group of people working towards a common goal (Ref. 17)

Discussion groups typically consist of around 15 farming members. Discussion Groups typically afford farmers the opportunity to achieve some of the following:

1. Solving Problems.
2. Trying innovative ideas.
3. Accumulate technical knowledge from other farmers.
4. Gain new friendships and connections.
5. Improved interpersonal and communication skills.

Successful Discussion Groups

Successful discussion groups are often dependent on a number of factors such as:

1. A chairperson/facilitator to adequately **organize** group sessions including **location** or host farm as well as **topics** for discussion.
2. A **timetable** of **proposed dates, venues, and topics** for the year ahead.
3. The presence of a **highly skilled facilitator** (Ref. 17)
4. Setting ground rules: These include **starting on time, finishing on time**, identifying what is **confidential** and what is not, **do not talk over people, listen to every member’s view** (Ref. 18).



Problems That Can Arise in Discussion Groups.

Identified are some common issues that a discussion group facilitator should be on the lookout for. Early intervention and other tools such as feedback from the group after each meeting can avoid the issues presented.

1. Low Energy and lack of Interest – This issue could occur for several reasons. Once the facilitator notices the issues they should: Ask the group for **their opinion, ask group members what they would do themselves**, provide **descriptive feedback** and your own opinion or **have a break such as a cup of tea or coffee or a walk**.
2. Group deviating from the topic at hand – When discussions are in full flow it can easily happen whereby farmers will get **sidetracked** and begin to talk **about issues that are affecting them more at that moment in time**. Facilitators should **remind the group what the original agenda and topic of discussion** is, ask if that topic can be postponed for discussion until the next meeting, and remind the group to revert to the original topic.
3. High emotions throughout the group – This can occur when a **sensitive topic** is being discussed. Group members may get involved with **verbal arguments** with each other. While **debate is healthy** this type of **emotion can be destructive and unhealthy for a group's longevity**. Facilitators should let it go where possible; however, an **intervention will be required if it is personal or beyond the group's values and purposes**.
4. Individuals dominating discussion – Some individuals may **dominate a discussion** of several reasons. If a facilitator notices this, they should **thank the person for their contribution** and **ask to hear from someone else, break eye contact** with the person, **summarize what they have said and move to someone else** and maybe give the person a **limit of time in which they have been assigned to speak**.
5. Individuals not participating in discussion – Group members may **not feel comfortable** speaking around **large number of people**. It is important that a facilitator is aware of who the quiet group members are. A facilitator could use methods talking to them privately to help them gain confidence to speak, asking them to share their thoughts on a topic during the meeting, or turn to ask them a question when there is a topic you know they are highly informed about.
6. Side Conversations – Side conversations can occur when members are **distracted**, or they have something they wish to add to the discussion. A facilitator **should ask them what they are discussing**, the facilitator should **stop talking** and wait for the other to stop, **move closer** to the people while **maintaining eye contact**, or ask them that there is only one discussion at a time.



7. Falling attendance rates – Attendance can be an issue for people on a personal level more so than as a collective group. Individuals may arrive late continuously or do not arrive at all. In the early stages of group development, it is important to **set the punctuation standards for the entire group**. Should a member continue to arrive late a facilitator should consider getting them to **outline their reasons to the whole group**, this may deter people from being late in the future.

Direct Benefits to Farmers Who Partake in Discussion Groups

1. Increased Profitability – Research has found that farmers who partake in discussion groups are more likely to **increase farm profitability** due to the increased openness to change and technological uptake.
2. Social Networks – Being part of a discussion group gives farmers an opportunity to get away from their usual environment and surroundings. As farming can be a challenging sector due to the volatility and uncertainty around prices and weather it is important that farmers have the opportunity to **meet other farmers** and **share their opinions, feelings and experiences**.
3. Personal Development – Discussion groups afford farmers the opportunity to **improve their communication and interactive skills**. Farmers become much more efficient at sharing information and therefore improve their self-confidence.
4. Access to technical information – Discussion groups will have a wide variety of expertise and educational background throughout. When a group of farmers who all have different knowledge and experiences come together there can be a major benefit in terms of **receiving up to date and accurate technical information related to their day-to-day farming enterprises**.
5. Public Responsibility – Discussion groups aid in **creating a positive image of the agricultural sector** as farmers work together to deliver produce in an efficient manner.
6. Improved planning – As discussion groups tend to follow a yearly plan aligned with farming practices from that time of year farmers are much more likely to implement a plan for their own farm. E.g., A discussion group in May/June may discuss making high quality silage, therefore farmers are more likely to **think proactively** about how they can achieve this on their own farm.
7. Positivity – When a farmer makes progress as a result of knowledge gained at a discussion group there is an improved attitude throughout the group.



8. Performance benchmarking - Allows farmers to **compare KPI's** with other farmers of similar scale and production output as their own. Farmers can **compare their performance to their peers**.
9. Awareness of schemes – Due to the complexity and number of schemes available it is important that farmers are proactive in their approach to understanding these schemes. Discussion groups are a great way of achieving knowledge around this.
10. Improved problem-solving ability – When a farmer is faced with an issue on their farm, they can turn to their discussion group to **seek advice** from other who may have experienced a similar issue in the past.

Activity: Please watch this video regarding the importance of discussion groups. An Irish example <https://www.youtube.com/watch?v=AINxvH2LMDU>

Farmer Testimonials of Discussion Groups

"The social aspect has been vital in keeping the group together over the years. Being able to share your farming experiences and use group meetings to solve problems on your farm is invaluable." (Ref. 19)

Agricultural Advisors/Facilitators in Discussion Groups

- A skilled advisor should be talking for no more than **30%** of the time during the discussion group.
- The Facilitator should **allow the group to have a debate** amongst themselves on the topic.
- If the facilitator believes that there is some unclarity about the topic they should **clarify the point** so that everyone is informed correctly.
- Ensure that the group **remains on track** with the topic that they should be discussing and don't deviate too far from it.
- A facilitator should keep their **technical knowledge input to a minimum** when possible.
- **Do not be afraid of silence** when a question as posed by the facilitator **Silence is healthy** as often gets the group thinking.



Facilitators Skills and Values

Table 4: Core Values. Source: (Ref. 20)

| Core Values | | | | |
|-------------|------------|--------------|----------------|-----------------------|
| Flexibility | Confidence | Authenticity | Integrity | Patience/Perseverance |
| Leadership | Initiating | Perceptive | Enthusiasm | Open minded |
| Humility | Optimism | Steadiness | Self-awareness | Respect (Ref. 20) |

An effective facilitator will display a number of different core skills such as:

1. Body language
2. Active listening
3. Questioning

An outline of all 3 can be found below.

| Body Language | |
|------------------------|--|
| Types of Body language | |
| Gestures | Gestures can come across in a negative manner. Facilitators should ensure that the gestures they use are positive such as an open hand when asking a question or nodding their head while a group member talks. Both promote openness and opinions. |
| Facial Expression | Facial Expressions can again be positive or negative. Facial expressions that appear to be questioning or disagreeing with the group members' statement should be avoided. |
| Positioning | Where the facilitator places themselves in the discussion is very important. Discussion will ideally take place in a U shape or circle. The facilitator should be front and center of this encouraging discussion. |
| Tone of Voice | The tone of voice used can positively or negatively affect the delivery of the message from the facilitator to the group. |
| Eye Contact | Ensure you use eye contact at all stages both while asking a question, answering a question, listening, or summarizing. |
| Listening | Listening is said to be one of the most important core skills of a facilitator. When ideas and feelings are highlighted to a group by a member, they want to feel listened to and understood. It is important that a facilitator uses active listening (Ref. 20) |



Active Listening

Active listening should be practiced by all facilitators.

Questioning

In order to deliver a high-quality meeting a facilitator may be required to ask more questions. A facilitator must be skilled at asking the right questions at the right time. Facilitators could use a number of different types of questions.

1. General – This question could be addressed to the **whole group**.

2. Direct - This question would be addressed to an **individual**.

3. Open questions –

This question requires **more than a yes or no** answer.

4. Factual – This question seeks a **specific answer**.

5. Redirected – This occurs when the facilitator reflects a question that they have been asked back to the group.

6. Leading – This helps **steer the group** towards a specific answer.



Figure 7: 7 key active listening skills



Table 5: Facilitator Core Skills Source: Teagasc Facilitators Handbook (Ref. 20)

| Open questions | Closed questions | Probing | Paraphrasing |
|----------------|------------------|-----------------------|-------------------------|
| Who | Could you | Explain further | In other words, |
| What | Are you | Put that another way | What you saying... |
| When | Would you | Tell me more | What your telling me... |
| Where | Do you | Anything else that... | |

Facilitation Techniques

1. **Interview** – This is whereby a farmer may be asked a number of questions at the farm visit. Facilitators should follow a sequence whereby they open, with the question, clarify the point the farmer has just made and close the discussion with one last comment or query about the topic,
2. **Discussion tree** - The discussion tree is an effective method in avoiding silence amongst the group. It almost forces other group members to speak up and share their thoughts.
3. **Hard Facts** – This is where the facilitator will discuss research that has been carried out on the topic of discussion. E.g., Research tells us that...
4. **Scenario** – The facilitator will provide the group with a scenario that they have encountered previously. The facilitator will explain all the details of the case and ask the group what their immediate thoughts on this are, or what actions they would take should it be on their farm.
5. **The Grenade** – This refers to a statement that sparks some controversy within the group. It gets farmers and group members very involved as they may not agree with the statement. This method should be used with caution as it can reflect on the facilitator if not used correctly.
6. **Summarizing and focusing actions for the host farmer** – The facilitator should summarize the points that have been made and the key takeaways that the host farmer should have.
7. **Debate** – Debate can be used to generate group energy. This method should be carefully managed by the facilitator so that the debate doesn't get personal and out of hand.



UNIT 3: BEHAVIOR OF GROUPS

Group Motivation

Successful group work and interactions are often dependent on the question of how to keep and maintain task motivation of the individual group members. There can be several reasons individuals in groups do not perform to the desirable expectations and potential that they have. Group members can feel **less identifiable** and **subject to evaluation**, group members may recognize that they can work collectively in a group **without putting in high levels of individual effort**, as well as only contributing what they believe is their **fair share of the workload and effort**. Group interactions often receive significantly less effort and individual work from members in comparison to the effort they may put into individual tasks (Ref. 21). Although the following information may be directly applicable to employees this is also highly applicable to groups in agricultural settings such farmer discussion groups and other stakeholder group settings.

Activity: Please watch this short video focusing on teamwork. “Be there for each other”
<https://www.youtube.com/watch?v=zP9jpxitfb4>

Two Types of Motivation

1. Extrinsic Motivation – Refers to **external motivating factors**. These may include **raises, staff parties/** group get together as well as negative motivators such as **loss or removal** of a group courtesy or place in the team.
2. Intrinsic Motivation – This refers to more personal and collective motivation such as **passion, ambition, curiosity**. This is heavily linked to **discretionary effort**.

Benefits Of a Motivated Group/Team

1. Higher Productivity – Motivated group or team members are typically much **more productive** than their unmotivated counterparts. Focus and resilient members focus on completing tasks to a **very high standard and to the best of their abilities**.
2. Increased levels of Innovation – Motivated group members are more interested in **finding solutions** to problems especially when they feel **appreciated**. Group managers who understand the needs of their team members on an individual and group level will have a large amount of success in terms of delivering innovative ideas.
3. Reduced absenteeism – Absenteeism is said to lower in groups where the members are **highly motivated**. This can come down to a number of reasons such as **feeling appreciated and experiencing less stress**.
4. Lower rates of turnover – Enthusiastic and motivated group members will be much more likely to **show up on time and complete tasks on time**. Along with this group



members who feel comfortable and appreciated in their position have a **higher likelihood of remaining in the role**.

5. Improved relations – Highly motivated groups will display **higher quality relations** both with each other and the team leader. This fosters a **positive culture** in the group that feeds back to other areas such as improved productivity, increased levels of innovation and lower rates of absenteeism and turnover (Ref. 22).

Maslow's Hierarchy of Needs



Figure 8: Maslow's Hierarchy of Needs. Source: (Hopper, 2024) (Ref. 23)

1. Physiological needs – These refer to the most **basic human needs** for survival. Physiological needs are the first things that motivate behavior. According to Maslow's theory physiological needs are the **most important**, making the other four needs **secondary until the basic needs are met**.
2. Safety Needs – The requirement for safety needs comes once physiological needs have been fulfilled. Safety needs refer to **people's motivation to have a reliable job, secure income, own property, have good health as well as the freedom of fear and the unknown**. It creates a scene of **predictability, routine and control**. (Ref. 23).
3. Love and Belonging – The third part of Maslow's theory is that of love and belonging. This refers to friendships, trust, acceptance, affection, and love.
4. Esteem – Esteem is the fourth step in Maslow's theory. It considers an individual's requirement for respect, **self-esteem, status**. It can often be linked to the desire to gain a **positive reputation and respect from others**.
5. Self-Actualization – This is the final and highest level of needs in Maslow's theory. This level considers what an individual's **full potential** is. Every individual will have different **desires** within this stage. This is the stage where individuals **wish to accomplish everything one can achieve** (Ref. 24).



Activity: Please watch the following illustration of Maslow's hierarchy of needs.
https://www.youtube.com/watch?v=O-4ithG_07Q

Group Decision Making

Group success and performance can often be **dependent around the success and implementation of collective decision making**. Outlined below is a seven-step decision making model.

- 1) Identify the decision to be made:
 - The group must identify what exactly they **wish to achieve**.
 - Identify a **goal to work towards**.
 - Groups should consider: What they are being asked to do, what are the particulars of the assigned task, and what **issues** could be **faced along the way**.
- 2) Analyze the issue under discussion:
 - Upon identifying the goal to work towards step 1, examine the resources and extra information at hand.
 - Groups should consider: What is **causing the problem at hand**, why is the current scenario/situation not working, why does the issue need to be dealt with?
- 3) Establish Criteria:
 - **Propose a solution**. This solution should be feasible, allow for the group to develop and move forward, **meeting the needs and goals identified previously**.
 - Groups should consider: What would make a solution or a decision successful and **what criteria will determine if every group member is happy with the solution sought**.
- 4) Brainstorm potential solutions:
 - Use the information available and collected in the previous steps. All ideas should be considered at this stage with **no idea being ruled in or out**.
 - Groups should consider: **Are there any options being omitted or overlooked, what could we do in the absence of constraints?**
- 5) Evaluate options and select the best one:
 - Evaluate your list of potential solutions. Evaluation based on the best alternative to criteria identified in step 3.
 - **Identify the pros and cons of each solution**.
 - Identify what solution is most realistic in terms of completion deadlines.
 - **Identify which option has the best long-term solution**.
- 6) Implement a solution:
 - **This is the stage where the solution is put into practice**.
 - Here decisions should be made such as:
 - **What needs to be done**, when does it need to be done, who needs to do it, and in what order does it needs to be completed.
- 7) Monitor and evaluate the outcome:



- **Continue to monitor** the outcome of the solution reached. If the solution is not successful, the group can revert back to step 3 and begin the process again (Ref. 25).

Group Conflict



Figure 9: Group Conflict animation. Source: LinkedIn

Conflict within groups can be **a major issue and detriment of group productivity**. When groups of people work together there is always the possibility that conflict will arise for several potential reasons. Actively working to avoid such conflict is an important aspect of group management, however it is important that individuals know how to deal with and resolve the conflict when it does arise. Conflict is described as the process in which **one party suggests that its interests are being opposed by another party** (Ref. 26).

Although conflict can be viewed as a negative occurrence in a group, it can also be seen from a positive perspective.

- a) Conflict is **natural**.
- b) Conflict is necessary – Conflict can **promote innovative thinking and decision making when adequate management is in place**.
- c) Conflicts are based on real differences - This point considers the fact that conflicts can often be dependent upon personal differences rather than poor communication which is often referred to as a cause of conflict (Ref. 27).

Causes Of Conflict in Groups

Conflict in groups can be a common occurrence for many varied reasons. Explained below are common causes of group conflict.

- 1) Resistance to change – People often get used to their habits as they become **familiar and comfortable** with them. Change can often be a big deal for individuals due to **the fear of new experiences and uncertainty**. **Stress levels can increase during times of change** thus resulting in increased incidence of conflict. It is important that the facilitator, manager, or mentor communicate the reasons that change is needed and



provide the adequate training and upskills that may be required to successfully implement changes.

- 2) Unclear expectations – When an individual enters a new role or group it is important that they are **made fully aware of what is expected from them**. When an individual is unsure of what their role is or how they are meant to perform. This can result in a **loss of confidence by the group/team member**. When a new group/team is formed, or a new member joins it is important that the following points are made clear:
 - **Direct the tasks that the member is expected to perform.**
 - Give an outline of the culture of the group so that everyone is aware of the type of environment they are operating in.
 - Clarify reporting procedure that team members will be following.
- 3) Lack of communication – The process of communication is highly susceptible to a breakdown in communication at various stages throughout the process. It is important that every group member **communicates in a way that is clear, concise, listen to other team members' new ideas, and** manage your nonverbal behaviors and **learn to read other people**.
- 4) Personality clashes – In a group setting it is unlikely that every member will be friends with each other however there is an **element of respect required for a successful group/team setting**. As a group mentor there are a number of approaches that can be taken to avoid arguments and disagreements between the team.
 - Be **proactive in identifying potential issues**.
 - **Consider all points of view**.
 - Focus on **factual information**.
 - Ask for team members' ideas on how to best resolve any conflict that has arisen.
- 5) Poor habits – There are certain types of habits that can have a negative effect on groups/teams. These habits can often lead to **irritation and conflict**. Examples of these habits are:
 - Individuals always being **late** too group events.
 - An individual who **doesn't respect the norms and values of the group**.
 - An individual who is **not carrying out the tasks and responsibilities that they have been assigned** (Ref. 28).



Conflict Resolution Strategies

As a group facilitator, manager or mentor conflict resolution will likely be required at some point in the group's lifetime. There are a number of strategies that can be implemented to resolve issues that could potentially arise.

1. Address the conflict – **Ignoring the issue will not have any benefit in the long run.** It is important that the issue is discussed. In the scenario where issues are ignored group members can feel **forgotten, and unimportant.**
2. Clarify the Issue - Take the appropriate steps to **find out what exactly the issue is.** Be careful in whom you select to speak to gain information on the problem. **Ensure you check your sources and do not rely on rumors from within the group.**
3. Bring the conflicting parties together – Going **directly to the source of the problem** is the best way to get to the root of the problem. Although the individual responsible for resolving the conflict should talk to both parties separately, they should also talk to both parties together. Here they should be allowed to **talk the issue out with each other while the mediator helps them in finding a healthy and appropriate solution.**
4. Identify appropriate solutions – By now a solution will have been arrived at by both parties. It is important that the **mediator outlines the benefits of healthy relations within the group.** Inform both parties that continued **peace and a workable solution is the only acceptable outcome.**
5. Monitor and follow up – Regular **follow up and check ins** is an important task in effective conflict resolution. A mediator should ensure that both parties are honouring the agreement that they reached, and they are both satisfied with the outcome. If the solution isn't working as planned a further meeting with the parties may be required (Ref. 29).



Group Development

1. **Forming** – This is the first stage of group development. In this stage the group members will have a **very limited understanding and familiarity with each other**. It is important that the group's goals and purpose are outlined at this stage. Identifying what role each member will have in a group setting usually occurs at this stage. This can lead to some **tension between members** as individuals **compete for different roles**.
2. **Storming** – The second stage of group development. Here a high level of **conflict is often experienced as group members are still getting to know each other and competing for various roles and responsibilities**. With **adequate management** and facilitation from the group leader or coordinator during this stage of development the group will gel together thus be prepared for the Norming stage.
3. **Norming** – The norming stage is the third stage of the process. In this stage group members gain a sense of commitment and passion for the overall goals of the group. Here the group will **develop norms and guidelines that collectively must be upheld**. The norms developed can be formal expectations or less formal and unspoken or unwritten rules.
4. **Performing** – In the performing stage the group members tend to put any differences or disagreements aside and begin to work collectively towards the group's end goal and targets. Although guidance and direction may be sought from the team leader during this stage the group is typically working effectively amongst themselves. At this stage group members will now be **invested in the common good of the group and work hard towards achieving that goal**.
5. **Adjourning** – The final part in the group's journey. All the tasks will have been completed at this stage to help the group reach its goal identified in the earlier stages. Groups should **discuss what worked well for them during the duration of their lifespan** (Ref. 30).



Figure 10: Group Development Stages. Source: (Ref. 52)

Activity: Please watch this short video about Tuckman's stages of group development.

<https://www.youtube.com/watch?v=-RwkZxGPQb8>



UNIT 4: COMMUNICATION SKILLS

Introduction

Effective communication is essential for the success of both group interactions and one-on-one exchanges. Strong communication skills are crucial in both **educational and social settings**, as they **facilitate understanding, collaboration, and problem-solving**. In this lesson, we will explore key aspects of communication, beginning with an overview and background, before examining the elements of public speaking, the barriers that hinder effective communication, and the processes that typically drive successful communication.

Background to Communication

What is Communication?

- Communication is **an interaction within a social context**, involving a **sender and a receiver**.
- Communication involves interlocutors exchanging signals such as verbal or written signals, visual, or gestural.
- Communication is done through body signals such as **voice, eyes, and body movements** (Ref. 31).
- Communication can be defined as: **“The process by which messages or information is sent from one place or person to another, or the message itself”** (Ref. 32).
- Considering communication from the agricultural extension perspective communication has a large role to play in **achieving agricultural goals**. Effective communication is more than just an exchange of information rather it is about understanding the emotion and intentions behind the information as well as being able to clearly convey a message (Ref. 33).

The Importance of communication skills

1. Basis of all human activity
2. Social and recreational reasons
3. Survival.
4. Resolve and avoid issues.
5. Share ideas.
6. Clarifies information.
7. Build trust in groups and teams and develop relationships.



What is the Purpose of Communication in an Agricultural Context?

- Communication is a key process in the agricultural industry whereby key pieces of information, particularly **regarding new technologies**, can be made available to farmers to allow them to make more **accurate and informed decisions**.
- Communication **connects farmers, stakeholders and other industry professionals affording each party the access to reliable industry information**.
- Improvements and advancements in areas surrounding modern technology such as digital devices, social media and the internet has made communication between stakeholders a much more **efficient process**, with the ability to **reach larger audiences**. These advancements have a positive role to play in advancing agricultural **productivity, efficiency, and transparency**.
- ICTs or Communication technologies have an ever evolving and essential role to play in the agricultural sector by fostering and promoting collaborations between parties and providing access to information.
- The role of ICTs in agricultural communication has been closely linked to the reduced use of agricultural raw materials and inputs reducing fertilizers, energy and water.
- ICTs have also been linked to aiding in the **decrease of environmental externalities as well as improving farmer and farm workers' quality of life** (Ref. 34)

To summarize the role of communication in an agricultural context it is typically said to be used for the following:

Making Decisions, Education and Persuasion.

Effective Communication in a Workplace/Group

Effective communication in a group or workplace is crucial for a variety of reasons. Teams that communicate well tend to have **higher morale**, which fosters the exchange of new ideas and promotes knowledge sharing. In the context of agriculture, this is particularly important for the adoption of innovative practices and ideas at the farm level. When communication is strong, teams also demonstrate **higher productivity and a greater sense of cohesion**, with members working towards a shared goal. Additionally, effective communication reduces confusion and misunderstandings, ensuring smoother collaboration. It also promotes transparency, enabling the team to address issues more efficiently and find solutions more quickly (Ref. 35).



Traits of an Ideal Communicator

1. Understand their audience's needs – The more an individual knows about someone the easier it is for them to listen to their story, **empathize with them, support them and provide guidance.**
2. Display Empathy – A good communicator will try to **understand the challenges, difficulties, worries** and concerns that may be on the mind of their peers or audience.
3. Display authenticity in their communication – Authentic communicators typically leave less questions when they are finished speaking. Whether as a facilitator or an employer, group members know what is on your mind and what they should be expecting.
4. Frequent and clear communication – Good leaders will consider communication as a **process of repetition rather than a check box exercise.** It is important that communicators **display consistency and rhythm** to their communication methods.
5. Provide context – Lack of context can be a significant barrier to effective communication. When communicating with a group or individuals there should be **background, strategy, objectives, and roles outlined from the outset.**
6. Listen and create dialogue – Oftentimes some of the best communicators are also the best listeners. They are **interested in what their audience says and want to hear how to feel.**
7. Openness towards questions – Rather than shying away from a question that they may not be fully sure of a good communicator can communicate through statements such as here's what I know, and here's what I'm working to find more details on (Ref. 36)

Aristotle's Three Parts of Persuasion

1. Ethos – Refers to the **credibility** of the speaker. Speakers should have a level of knowledge about the topic at hand.
2. Logos – Rationale behind the conclusion drawn by the speaker. The message must be conveyed in a clear and coherent manner and understood by the audience.
3. Pathos – Ability to **create connection between the speaker and audience.** This can be done through acquiring an emotional connection with the audience (Ref. 37).



Public Speaking

Public Speaking Can Be Defined as:

“The process or act of performing a speech to a live audience. This process can include preparation, organization, and the delivery of a message that is clear and engaging. It can range from a formal speech at a conference to an informal talk at a social gathering” (Ref. 38).

Public Speaking Has an Important Role to Play in Professional and Work Environments as it Fosters:

- 1) Confidence building – Public speaking allows individuals to **gain confidence** through continued practice in front of a group of people where they express their views and ideas. Regular public speaking sessions can help **overcome the anxiety and fear that an individual may experience before speaking to a group.**
- 2) Critical Thinking – In preparation of public speaking session the public speaker is challenged to think critically about the topic that they are about to present or deliver on.
- 3) Communication Skills – Overall communication skills increase with more regular public speaking sessions.
- 4) Professional Growth -
- 5) Networking opportunities – In an agricultural context public speaking affords the opportunity to meet and present to other people that are part of the wider agricultural extension services.
- 6) Influence and leadership – A skilled public speaker will have developed the ability to **motivate others.** In relation to agricultural groups this can be important as public speakers try to promote different aspects of agriculture to their audiences.
- 7) Education and awareness (Ref. 39).

3 Ps of Public Speaking

The three Ps of public speaking allow individuals to feel more confident in their approach to public speaking. They are as follows:

1. Prepare – Preparation work can begin prior to the speech. Individuals should prepare and understand the following points:
 - Understanding the audience size.
 - The length/time of the speaking session
 - What sort of environment will the talk be delivered in?
 - Write down key topics you wish to address in the delivery.



2. Practice – Once you have identified what topics you wish to address during the presentation you should practice its delivery.
 - Practice the **delivery and timing** of the presentation.
 - Practice the **pace** of the presentation.
 - Practice aloud.
3. Perform – Deliver the session just as you had prepared and practiced for.

Types Of Public Speeches

1. Impromptu Speech – Impromptu speeches are **not planned in advance**. They typically occur when there is **not adequate time in the real world to prepare a speech**. Examples of this could be at a meeting whereby you are asked to update team members on a certain area without any preparation.
2. Manuscript Speech – This type of speech is prewritten, and its purpose is to be delivered word for word as is prepared. Examples of these would include political speech delivery.
3. Extemporaneous speech – This is the most common type of speech that gets delivered. These speeches are built around key material and key points that **build a connection with the audience**. The delivery of the speech does **not have to follow the exact same wording as was prepared** once the key themes are spoken about (Ref. 40).

The ABC of Public Speaking

1. Accuracy
2. Brevity
3. Clarity (Ref. 41).

The 7 Ps of Public Speaking

1. Purpose – Why are you speaking? What message do you want to convey in your presentation?
2. People – Who is your audience? Are there any agendas or characteristics in the audience that could affect the way you deliver your speech?
3. Place – Why are you speaking to the group in this setting? Can you use this setting to your advantage to convey your message?
4. Preparation – Have an understanding as to what if any support material you will need to back up your presentation's?
5. Planning – What is the most effective way to layout your presentation to successfully convey the message.
6. Personality- How can you connect with the audience? Can you demonstrate your competence, charisma, and character?
7. Performance – What delivery technique is most effective on the day? (Ref. 42)



Personal Benefits Associated with Public Speaking.

1. Increased self-confidence.
2. Improved organizational skills.
3. Improved social influence.
4. Greater ability to listen.
5. Lower fear of public speaking.

The Fear of Public Speaking: Symptoms

1. Pounding heart.
2. Shaky hands.
3. Quivering voice.
4. Cold sweaty palms (Ref. 43).

Activity: Please watch this short video on public speaking
<https://www.youtube.com/watch?v=83wYDzO3Czl>

Overcoming Anxiety Around Public Speaking

According to studies public speaking is the number one fear amongst the general population. **75% of the population suffer from speech anxiety when asked to speak to groups of people** (Ref. 44)

There are a number of methods that can be used to reduce the instances of public speaking anxiety (PSA):

1. Practicing a speech beforehand.
2. Visualizing success during the speech.
3. Having a familiar/supportive audience present during the delivery of the speech as well as an instructor (Ref. 45)
4. Deep Breath – Breathing is the fastest way to regain control of your emotions.
5. Shifting Focus – Do not get too caught up on how nervous you are, instead focus on the message you want to convey to your audience.

Preparation

It is said that there is a five-step process towards achieving eloquent speech and public speaking preparation.

1. Invention - This refers to developing **and refining** the points of the argument that you wish to make. The points must be made and delivered in a way that can help to **persuade the audience**.
2. Arrangement – Arrangement refers to creating a **clear coherent and reasoned argument**.



3. Style – This is whereby the presenter will identify how they wish to present their argument. Here they will identify what techniques are most **interactive and engaging for the viewers** as well as identifying **words that will have a lasting impact** on them.
4. Memory – The final preparatory step. In this stage the presenter will try to memorize as much of their delivery as possible while also making their delivery sound natural.
5. Delivery - Here the speaker will put to use what they have practiced and make use of the appropriate voice and body language (Ref. 46)

Barriers to Effective Communication

There are many barriers that can affect the effectiveness of communication. It is important that students understand the typical obstacles can prevent or hinder communication in different settings.

Define Communication Barriers

Communication barriers can be defined as **obstacles** that an individual may face when attempting to effectively communicate with another person. These barriers can be anything that can **misrepresent and or avert someone during the communication process**. This process involves the sender, receiver and message. (Ref. 47).

Outline Of Communication Barriers

1. Physical Barriers – Noise, excessive information, environment, and time.
2. Psychological barriers – Hearing loss, speech disorder, vision impairment, body language issues.
3. Cultural barriers – Language barriers, conflicting values, geographical distances.
4. Interpersonal barriers – Lack of trust, lack of transparency, lack of patience.



Processes of Communication

Communication takes place as a process however this is not a straightforward process. Many scenarios can take place that can obstruct effective communication.

Communication Happens in a Sequence of 4 Events:

1. **Source** – The source is also known as the sender. Here it is important that the source **ensures clarity, cohesion and conciseness** when delivering or expressing the message. It is important to ensure that the source is confident in their delivery of the message as well as ensuring that the information contained is accurate and up to date.
2. **Message** – The message contains the information that must be passed along the process. Messaging allows individuals to communicate with each other.
3. **Channel** – This refers to how the message is sent. It can be **verbal, email, messages, reports, letters, social media posts and videos for example**. It is important that the appropriate channel is chosen to ensure the message is delivered in a clear and understandable manner.
4. **Receiver** – Each individual will interpret information in a manner unique to themselves. **Each receiver brings a variety of feelings and ideas that influence how they understand and respond to messages (Ref. 48).**

There are several factors that can influence communication either positively or negatively such as:

1. Attitudes.
2. Knowledge of topics.
3. Communication skills.
4. Environment.



Figure 11: Cone of Experience. Source: (Ref. 49)



Rogers: Adoption Processes

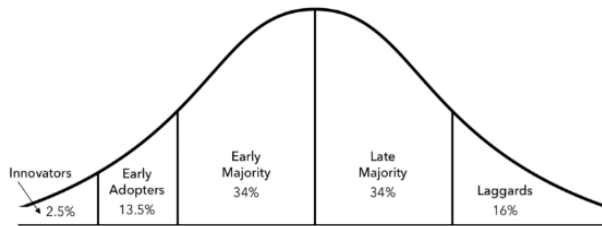


Figure 12: Adoption Process

1. **Innovators**: Very willing to experience innovative ideas and comfortable with **experiencing the unknown and the risk involved**.

2. **Early Adopter**: Willing to **take a step into the unknown**, their evaluations of an innovation play a big part in other willingness to make change.

3. **Early Majority**: **Open to innovation**, however their decision-making process is **slightly slower** than innovators and early adopters.

4. **Late Majority**: Typically wait until the majority of peers have adopted the innovation, as **to avoid the risk and uncertainty involved**.

5. **Laggards**: **Extremely hesitant** to make change, typically have a traditional mindset and view on innovation (Ref. 50).

7 Cs Of Communication

The seven Cs of communication are applicable to all forms of communication, let that be written, verbal, in person or online. They are as follows:

1. **Clear** - Clarity is ensuring what you're saying is communicated clearly and with **no room for misunderstanding**. Good advice for being clear includes:
 - Use **simple language** and focus on core points of your message.
 - **Don't use idioms** to prevent any confusion and ambiguity.
 - **Be clear in your mind about what you want to say** and its purpose before you say it.
2. **Concise** - Convey your points in a succinct and concise way. **Short sentences** are more likely to keep the attention of the listener, so try to use as little words as possible to communicate your message. Concise communication is **non-repetitive, saves time, and is more comprehensible for the audience**.
3. **Concrete** - A concrete message is precise and **backed by confidence** as well as the use of **supporting facts and figures**.
4. **Correct** - You should use the most suitable language for your specific message, and the best form of communication. Correctness also means **keeping your language free of mistakes**, whether that's grammatical, spelling, or other inaccuracies.
5. **Coherent** - **Coherent conversation** makes sense and flows logically. Think carefully about the order of your points and how you can make it come across in an easy-to-



understand way. It is also important to be consistent with style and content when delivering multiple forms of communication.

6. Complete - Make sure nothing is missing. Complete communication ensures the audience has all the information they need and are able to easily come to the desired conclusion. Good ways to be complete include:
 - Providing a 'call to action' i.e., what would you like your audience to do after receiving the message?
 - Including hyperlinks in written content to ensure all information is provided.
7. Courteous - It is important to be **polite and respectful** of your audience. **Being friendly, considerate, and professional will make your communications much more effective.** You should also be **transparent, open, and honest**, and be happy to answer any questions if applicable (Ref. 51).



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