



MANAGE Agricultural Extension “Evening4Learning (E4L)” Webinar Series



Topic : “Research Priorities in Agricultural Extension”



Schedule:

20-11-2022, 20:00–20:30 PM



About the Program

The MANAGE Agricultural Extension “Evening4Learning” Webinar Series is aimed at enhancing knowledge and professional engagement in the field of agricultural extension. The twelve-day series is structured with each day focusing on a distinct topic under a common theme, allowing participants to gain comprehensive insights into key areas of extension. The program is intended for a diverse audience, including postgraduate and doctoral students, agricultural faculty, and industry professionals. It covers broad themes ranging from entrepreneurship and sustainability to emerging technologies in agriculture.



MANAGE
Agricultural Extension
Webinar Series
(Online)

19-30 November 2022
19.00-20.30 pm (IST)

Agricultural Extension
To meet the new challenges in the agri-food systems





Speaker

Dr. P.V.K. Sasidhar

Professor

IGNOU

pvksasidhar@ignou.ac.in

 [pvksasidhar sasidhar](#)

About the Speaker

Dr. P.V.K. Sasidhar is a Professor at the School of Extension and Development Studies, IGNOU, New Delhi, with a Ph.D. in Veterinary Extension from the Agricultural University, Hyderabad. He has over two decades of experience in research, teaching, extension, training, and policy, including service with ICAR and prestigious fellowships from USDA, USAID, and Michigan State University. His research focuses on agricultural and veterinary extension, veterinary service delivery, livestock development, and professional competency enhancement. He has published around 100 research articles and more than 100 other publications and has undertaken collaborative research across India, the USA, Sri Lanka, Nepal, Cambodia, and several African countries. He has also contributed to national policy initiatives and international projects with institutions including Michigan State University, the University of Edinburgh, and the World Organisation for Animal Health (OIE). At IGNOU, he coordinates several academic programmes in Development Studies, Corporate Social Responsibility, Urban Planning and Development, and Animal Welfare.

Background

Agricultural extension systems worldwide are undergoing rapid transformation in response to changing agricultural, economic, social, and environmental contexts. The shift from conventional technology transfer approaches towards participatory, demand-driven, decentralised, and pluralistic extension systems has created new opportunities for research in agricultural extension.

As extension professionals increasingly assume roles as innovation facilitators, knowledge brokers, market enablers, and development partners, there is a growing need to generate evidence on effective extension models, stakeholder collaboration mechanisms, farmer-centric advisory services, and innovation systems.

Emerging challenges such as climate change, digital transformation, agripreneurship development, gender inclusion, nutrition security, and value chain integration have further expanded the scope of extension research. These evolving dynamics present significant opportunities to explore how extension systems can enhance technology adoption, strengthen farmer institutions, improve livelihoods, and contribute to sustainable and resilient agricultural development.

Evolution of Extension and Advisory Services

The evolution of Extension and Advisory Services (EAS) reflects a gradual transition from agent-led and technology-centric approaches towards beneficiary-oriented, participatory, and demand-driven systems. It was emphasised that agricultural extension research should reflect these changing realities and focus on improving the availability, accessibility, affordability, and quality of advisory services for farming communities. Extension services play a crucial role in facilitating the effective transfer and adoption of technologies and therefore remain central to agricultural transformation.

The importance of effective advisory systems was illustrated through contract farming arrangements in which extension services are integrated with input supply and market support. Such models demonstrate how bundled service delivery can improve farmer outreach and facilitate technology adoption. The effectiveness of different extension delivery mechanisms across commodities and farming systems represents an important area for future research.

The deliberations further highlighted the expanding role of extension systems in organising farmers into producer collectives, facilitating market access, supporting value chain development, enabling access to credit and inputs, and leveraging Corporate Social Responsibility (CSR) initiatives for rural development.

The growing relevance of Farmer Producer Organizations (FPOs), public-private partnerships, and stakeholder collaborations in strengthening extension outcomes was also emphasised. Research on these emerging institutional arrangements was identified as a critical requirement for enhancing the effectiveness of extension systems.

Research Priorities: Challenges in Agricultural Extension Systems

Agricultural extension systems face several institutional, operational, technological, and policy-related challenges that affect their effectiveness in delivering advisory services, promoting innovation, and supporting sustainable agricultural development. The major challenges identified are outlined below.

Key Challenges

1. Inadequate and Less Effective Extension and Advisory Services (EAS)

The effectiveness of EAS is constrained by shortages of qualified personnel, budgetary limitations, unclear roles and responsibilities, and inadequate professional competencies. These limitations affect the quality, reach, and responsiveness of extension services.

2. High Input-Oriented Research Outputs

Research outputs and extension approaches are often designed around high-input agricultural production systems. Such approaches may not be appropriate for small and marginal farmers operating under low external input production systems. There is a need to develop context-specific, affordable, and resource-efficient technologies and advisory services.

3. Weak Collaboration and Institutional Linkages

Inadequate collaboration among research institutions, extension agencies, farmers, private organisations, and other stakeholders remains a significant gap. Weak linkages hinder knowledge exchange, technology dissemination, coordinated action, and the effective utilisation of research outputs.

4. Inadequate Transition from Conventional Extension to Entrepreneurship

Agricultural extension has not sufficiently transitioned from conventional technology transfer approaches towards entrepreneurship-oriented and market-driven advisory services. Extension systems need to strengthen their capacities in agripreneurship development, business facilitation, value addition, market linkages, and enterprise promotion.

5. Greater Focus on Production than Prevention

Extension services tend to emphasise production enhancement rather than preventive approaches, risk reduction, and sustainable resource management. The presentation indicated that agricultural extension and advisory services reach approximately 40.5% of the agricultural population, highlighting the need to improve outreach and inclusiveness.

6. Inadequate Policy Support for Technology Application

Insufficient policy support affects the effective delivery, uptake, and application of available Technologies and Knowledge Products (TKPs). Greater attention is required to strengthen institutional mechanisms, implementation support, and enabling policies that facilitate the adoption and scaling of appropriate technologies.

7. Bias in Extension Services

Biases in the delivery of extension services can result in unequal access to information, technologies, and advisory support among different categories of farmers. Extension systems need to ensure inclusive, equitable, and need-based service delivery.

8. Inadequate Adaptive Research for Sustainable Technology Transfer

A significant gap exists between technologies developed through research and their actual adoption by farmers. Inadequate adaptive research limits the customisation of technologies to local agro ecological conditions, farming systems, and socioeconomic realities. Strengthening farmer-participatory and location-specific research is essential to improve technology adoption and sustainability.

Addressing these challenges requires strengthening the institutional capacity of extension systems, improving human resources and professional competencies, promoting research-extension-farmer linkages, encouraging entrepreneurship-oriented advisory services, and ensuring inclusive policy support. Greater emphasis on adaptive research, participatory technology development, and sustainable technology transfer is essential to bridge the gap between research outputs and their effective adoption by farmers.

Research Priorities in Online and Distance Education and e-Extension

The development of Open and Distance Learning (ODL) and e-Extension materials should focus on learner needs, accessibility, adult learning principles, interactive communication, and the practical application of knowledge. The following key research priorities were highlighted.

Key Research Priorities

1. Needs Assessment and Relevance

Learning materials should be aligned with the needs, expectations, and priorities of stakeholders. Research should examine the extent to which publications and educational resources address the actual information and learning requirements of their intended users.

2. Accessibility and Appropriateness

Educational publications should be easily accessible, user-friendly, and appropriate for the target audience. Attention should be given to the suitability of content, format, language, and delivery methods to ensure effective learning.

3. Application of Adult Learning Principles

- Self-explanatory and easy to understand.
- Self-contained, with adequate learning resources.
- Self-directed, allowing learners to progress independently.
- Self-motivating, encouraging continued engagement.
- Self-evaluative, enabling learners to assess their own progress.

4. Two-Way Communication and Interactivity

Learning platforms should facilitate dialogue, interaction, and feedback between learners and educators. Research should explore effective approaches for promoting active participation and meaningful communication in digital learning environments.

5. Learner Involvement and Practical Application

Learning materials should include activities, assignments, exercises, and practical tasks that encourage learners to apply newly acquired knowledge and skills in real-life situations, particularly in agricultural extension practices.

6. Structured Learning Pathways

A clearly defined learning map should be provided to facilitate self-directed learning. It should specify learning objectives, expected outcomes, learning activities, and assessment methods to guide learners throughout the learning process.

7. Programmed Instruction and Content Organisation

Learning content should be organised into small, logically sequenced sections and subsections. This approach can improve comprehension, facilitate gradual learning, and reduce cognitive overload.

8. Effective Design and Presentation of Learning Materials

ODL and e-Extension resources should incorporate the following features:

- Clear format, overview, and logical structure.
- Adequate examples and illustrations.
- Linkages with learners' prior knowledge and experiences.
- Integration of textual content with multimedia resources.
- Relevant case studies and practical applications.
- Appropriate references and supplementary learning materials.

The effectiveness of ODL and e-Extension materials depends not merely on the availability of digital content but also on its relevance, accessibility, learner-centred design, interactivity, and practical applicability. Research should therefore focus on developing inclusive, engaging, self-directed, and outcome-oriented learning resources that strengthen knowledge acquisition and skill development among agricultural extension stakeholders.

Research Priorities in Knowledge Management in Extension and Advisory Services

Extension and Advisory Services (EAS) are increasingly becoming knowledge-intensive systems in which extension professionals play a critical role in generating, documenting, organising, validating, managing, and disseminating agricultural knowledge.

With the expansion of digital technologies and pluralistic extension systems, large volumes of information are being generated by research institutions, universities, government departments, farmers, FPOs, NGOs, private organisations, and other stakeholders. A major research priority is therefore to understand how this diverse knowledge can be systematically captured, organised, shared, and converted into useful information for decision-making at different levels.

Key Research Priorities

1. Development of Knowledge Repositories

Research is needed to develop structured and user-friendly knowledge repositories for agricultural extension. Such repositories can bring together research findings, technologies, success stories, best practices, training materials, policy documents, case studies, videos, and other extension resources.

Studies can assess the effectiveness of different repository models in terms of accessibility, searchability, quality, updating mechanisms, interoperability, and utilisation by extension professionals and farmers.

2. Knowledge Documentation and Management

Extension institutions generate considerable field-level knowledge through training programmes, demonstrations, farmer interactions, exposure visits, and development initiatives. However, much of this knowledge remains undocumented or dispersed across individuals and institutions.

Research can focus on the systematic documentation of tacit and experiential knowledge, particularly farmers' innovations, indigenous practices, successful extension approaches, and locally relevant solutions. Methods for converting tacit knowledge into reusable knowledge products can also be explored.

3. Monitoring and Evaluation of Knowledge Systems

There is scope for developing evidence-based monitoring and evaluation frameworks to assess whether knowledge generated by EAS institutions is reaching intended users and contributing to improved decision-making.

Research may examine indicators such as knowledge access, utilisation, user satisfaction, learning outcomes, behavioural changes, and the application of knowledge in farming and extension practices.

4. Social Media Reach and Engagement

Social media has become an important component of agricultural knowledge dissemination. State Agricultural Universities, ICAR institutes, government departments, and other organisations increasingly use platforms such as Facebook, YouTube, Instagram, X, and WhatsApp to reach farmers and other stakeholders.

Research is required to develop standardised indicators for measuring social media reach and engagement.

For **reach**, potential indicators include follower growth, impressions, reach, profile visits, website traffic, number of visitors, percentage of new visitors, and bounce rate.

For **engagement**, indicators may include clicks, likes, shares, comments, mentions, saves, and other forms of audience interaction.

Research should go beyond these basic metrics and examine which types of agricultural content, communication formats, platforms, and posting strategies generate meaningful engagement.

An important research question is whether high digital reach actually translates into knowledge acquisition, improved awareness, participation in extension programmes, access to services, or changes in agricultural practices.

Thus, future studies should establish the relationship between social media metrics and actual extension outcomes rather than treating follower numbers or impressions alone as measures of effectiveness.

5. Digital Communication Strategies

Research can examine how agricultural knowledge should be packaged and communicated for different audiences and digital platforms. Studies may compare text, infographics, short videos, podcasts, interactive content, and other formats in terms of their ability to communicate complex agricultural information.

Audience segmentation, language, localisation, timing of communication, and accessibility for digitally excluded groups are also important areas for investigation.

6. Agricultural Knowledge Networks

Modern EAS involve multiple actors rather than a single extension agency. Research can therefore focus on agricultural knowledge networks connecting farmers, extension professionals, researchers, universities, KVKs, FPOs, NGOs, private-sector organisations, and government agencies.

Network analysis can help identify important knowledge actors, information flows, gaps, bottlenecks, and opportunities for collaboration.

7. Quality, Validation, and Credibility of Agricultural Information

The rapid expansion of digital information creates a need to examine the accuracy, relevance, timeliness, and credibility of agricultural information.



Research can explore mechanisms for scientific validation, expert review, updating of digital content, and identification of misinformation. This becomes particularly important as farmers increasingly access agricultural advice through social media and other digital platforms.

Overall, research in EAS knowledge management needs to move from simply managing information to managing knowledge for measurable extension outcomes. Priority should be given to developing integrated knowledge management systems, evidence-based M&E frameworks, social media analytics, digital communication strategies, knowledge networks, and mechanisms for validating and converting diverse sources of agricultural knowledge into actionable information.

Such research can strengthen the ability of EAS institutions to capture institutional and field-level knowledge, facilitate knowledge exchange, reduce information gaps, and improve the effectiveness and accountability of contemporary agricultural extension systems.

Research Priorities in Social Media Reach and Engagement

Social media has emerged as an important channel for agricultural extension, with State Agricultural Universities, ICAR institutes, and other agricultural organisations increasingly using digital platforms to communicate with farmers and other stakeholders. However, there is a need to move beyond measuring the volume of content posted and systematically assess the reach, engagement, and effectiveness of social media-based extension.

A key research priority is the development and validation of Key Performance Indicators (KPIs) for monitoring social media-based extension activities.

For reach, indicators may include follower growth, impressions, reach, profile visits, website traffic, and the number of visitors generated through social media platforms. Web traffic indicators such as the number of visitors, percentage of new visitors, and bounce rate can help assess how effectively social media content directs audiences to extension websites and digital resources.

For engagement, research can focus on indicators such as clicks, likes, shares, comments, mentions, saves, and audience interactions. These indicators can be analysed to understand which types of agricultural content generate greater audience participation.

Further research may examine engagement patterns across different platforms, content formats, agricultural topics, audience groups, and posting frequencies.

Research should also examine the relationship between reach and meaningful engagement, rather than treating high follower counts or impressions as evidence of extension effectiveness. Studies can explore whether social media interactions lead to increased awareness, knowledge acquisition, adoption of recommended practices, participation in extension programmes, or access to agricultural services.

Developing standardised Social Media Monitoring and Evaluation (M&E) frameworks for agricultural extension could help institutions systematically assess digital outreach, identify effective communication strategies, and improve the effectiveness of social media as an extension tool.

Key Highlights

- **Evolution of Extension and Advisory Services:** Emphasised the transition from conventional, technology-centric extension approaches towards participatory, demand-driven, decentralised, and pluralistic advisory systems.
- **Strengthening Institutional Collaboration:** Highlighted the importance of research-extension-farmer linkages, public-private partnerships, FPOs, and stakeholder collaboration in improving extension effectiveness and technology adoption.
- **Addressing Emerging Extension Challenges:** Identified critical gaps related to qualified manpower, budgetary constraints, professional competencies, policy support, service delivery, and the gap between technology development and adoption.
- **Promoting Learner-Centred ODL and e-Extension:** Stressed the need for accessible, self-directed, interactive, and outcome-oriented learning materials incorporating adult learning principles, practical exercises, and structured learning pathways.
- **Strengthening Knowledge Management Systems:** Emphasised the development of knowledge repositories, systematic documentation of field experiences, validation of agricultural information, and effective knowledge-sharing mechanisms.
- **Developing Social Media Monitoring and Evaluation Frameworks:** Highlighted the need for standardised Key Performance Indicators (KPIs) to assess digital reach, audience engagement, content effectiveness, and the contribution of social media to extension outcomes.
- **Enhancing Research for Sustainable and Inclusive Extension:** Underscored the importance of adaptive research, entrepreneurship-oriented advisory services, digital communication strategies, and inclusive approaches to improve technology adoption, farmer livelihoods, and agricultural resilience.

YouTube Link:

<https://youtu.be/zomYNqdFMB8?list=PLcfEugbo2RL0&t=3346>

E4L Report Prepared by:
Dr. Vavilala Priyanka
MANAGE Fellow

MANAGE - Center for Agricultural Extension Innovations, Reforms and Agripreneurship (MANAGE- CAEIRA)
National Institute of Agricultural Extension Management (MANAGE)
Rajendranagar, Hyderabad- 500 030, INDIA