



Relook on Extension Approaches and Models — Need for New

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III PhD**

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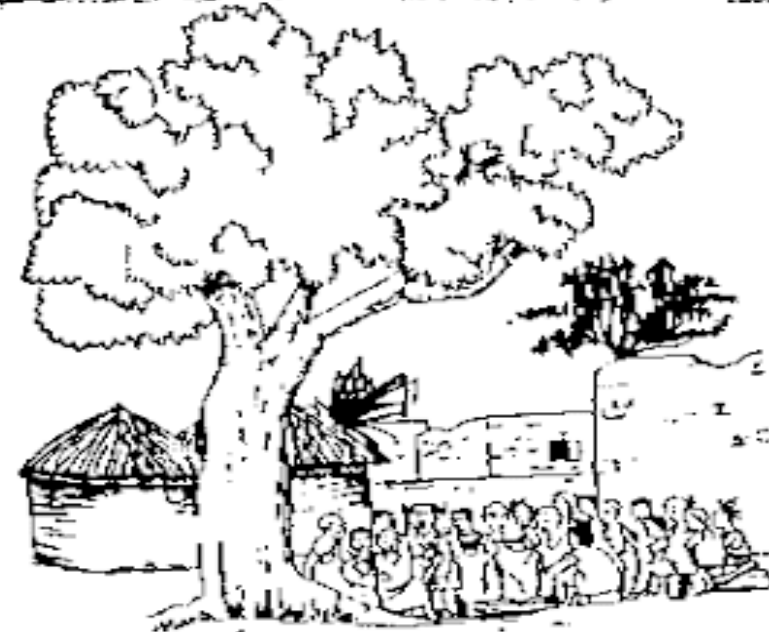
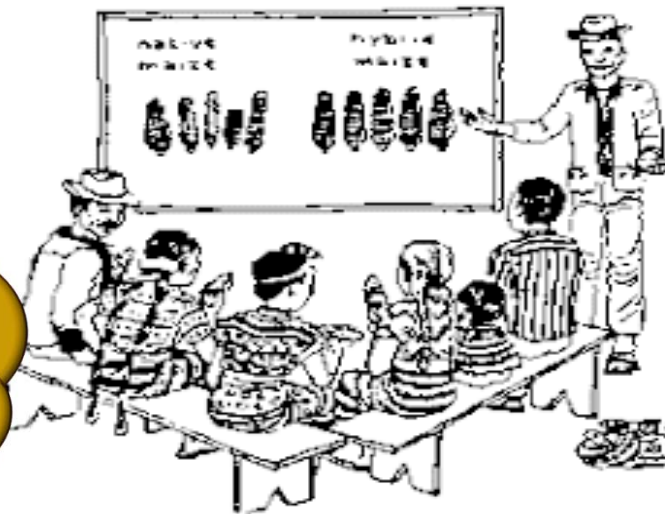
A silhouette of an elderly person standing outdoors, holding a cane. The person is positioned in the center-left of the frame, facing right. The background is a warm, golden sunset or sunrise, with the sun low on the horizon, creating a strong backlight effect. Bare trees are visible on the left and right sides of the frame.

The best classroom in
the world is at the feet
of an elderly person.

— Andy Rooney

➔ **Empowering the rural
community through education
and communication**

PUBLIC SECTOR



One main public system

Pluralistic system with public and private advisory services

National coverage by the public sector

Multiple advisory service providers, with thematic or geographic focus

Focus on agricultural development

Extended mandate for agricultural and rural development

Hierarchical lines of command

Enhanced horizontal collaboration and multi-disciplinary teams



CRITICAL THINKING

Reflections from practice
is an important type of
learning which helps
everyone to draw lessons
and use these for
continuous improvement
in his/her ways of working



self-awareness

Personal and Professional growth.



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Objectives

- 1.To review various extension approaches and models**
- 2.To understand the need for newer models and theories for changing scenario**
- 3.To review related research studies**



Model

- ❖ A three-dimensional representation of a person or thing or of a proposed structure, typically on a smaller scale than the original
- ❖ A thing used as an example to follow or imitate.

Extension models show “how the program is structured and organised”



Agricultural
extension can be
classified into
various models

Source of funding

Target

Approach

Source of funding

Public extension: Funded by ministries and departments of agriculture and agricultural research centres.

Private extension: Provided by private extension agents such as input manufacturers or distributors, and private consulting enterprises.

Non-profit sector: Financed by local, provincial, national or international non-governmental organizations such as foundations, commodity groups, and other non-commercial association.

Cost-sharing: Cost of agricultural extension is shared between the clients (local farmers or producers) and the other stakeholder group (i.e. the public sector).

Perception of farmers towards public, private and corporate extension system in Karnataka state

Tanweer Ahmed *et. al.* (2016)

Table-I Perception of public, private and corporate famers towards extension systems (n=90)

Sl. No.	Category	Public (n ₁ =30)		Private (n ₂ =30)		Corporate (n ₃ =30)	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
1	Least favourable	11	36.66	8	26.66	12	40.00
2	Favourable	11	36.66	13	43.33	8	26.66
3	Most favourable	8	26.66	9	30.00	10	33.33

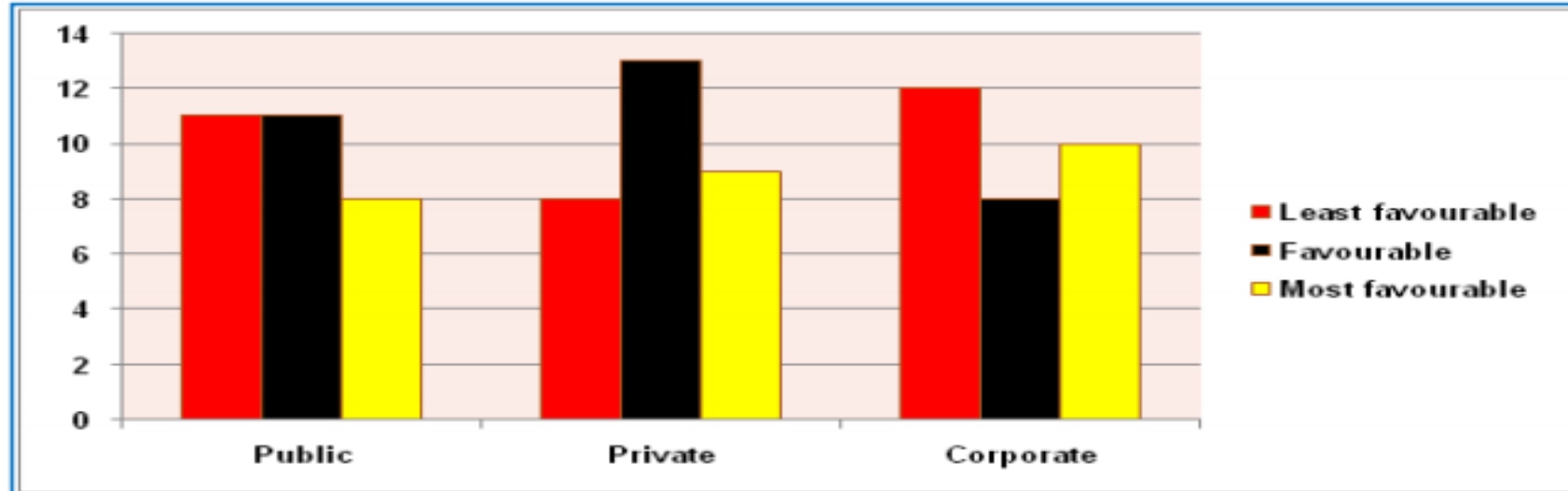


Fig-1 Perception of Public, Private and Corporate famers towards Extension system

Target/ Audience

- **Individual extension:** Extension workers interact on a one-on-one basis with farmers.
- **Group extension:** Focuses on specific communities.
- **Mass extension:** Reaches a number of people at the same time. It may include different media such as web site publishing, e-learning tools and traditional mass media (print, electronic).

Approach

Extension approach is defined as a style of action, embodying the philosophy of an extension system which, by and large determines the direction and nature/style of the various aspects of that system, such as its structure, leadership, program, methods and techniques, resources, and linkages.

-Axinn, 1988

It consists of a series of procedures for planning, organizing and managing the extension institution as well as for implementing practical extension work by staff.

Rivera (1988)

<i>System Approaches</i>	<i>Types of Systems</i>	<i>Relationship to farmers</i>
Top-down “delivery services”	Conventional Training and visit(T&V) University Technical innovation Integrated agricultural development program	Take it or leave it
Participatory “acquisition systems”	Farmer information dissemination system Farming system research-extension	Take it or demand different packages (or programs)
Contract “farming systems”	Commodity development Commodity focused	Take it or else
Rural development	Community development Integrated rural development programs D V KUSUMALATHA III PhD	Take it or turn away

**Axinn
(1988)**

General agricultural extension approach

Commodity specialized approach

Training and Visit approach

Participatory approach

Project approach

Farming system development approach

Cost sharing approach

Educational institution approach

Pacific community (2005)

Push based approaches

- Researchers identify how production could be improved
- Information provider
- Assume relevance of technology to farmers and ignore contextual barriers to uptake

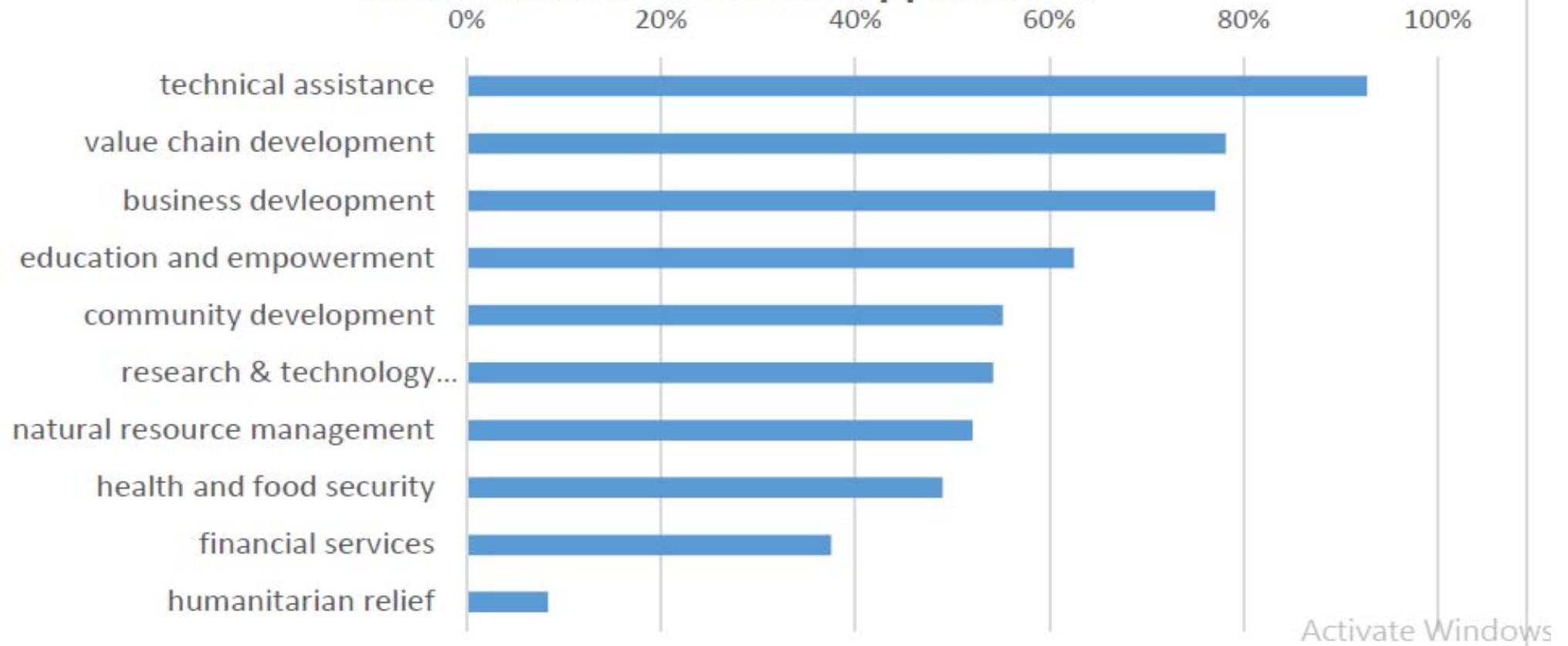
Pull based approaches

- Farmer based need analysis
- Facilitator
- Not effective on its own as farmers have insufficient power to challenge

Innovation based approaches

- Farmers, trainers, markets, researchers
- Enterprise broker and convenor
- Often focus on early adopters, fails to address expectations of passive receipt of information

Prevalence of Extension Approaches



Extension Activities Targeting Small Farmers in Developing Countries, MEAS report,
2016

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Agricultural Extension Models

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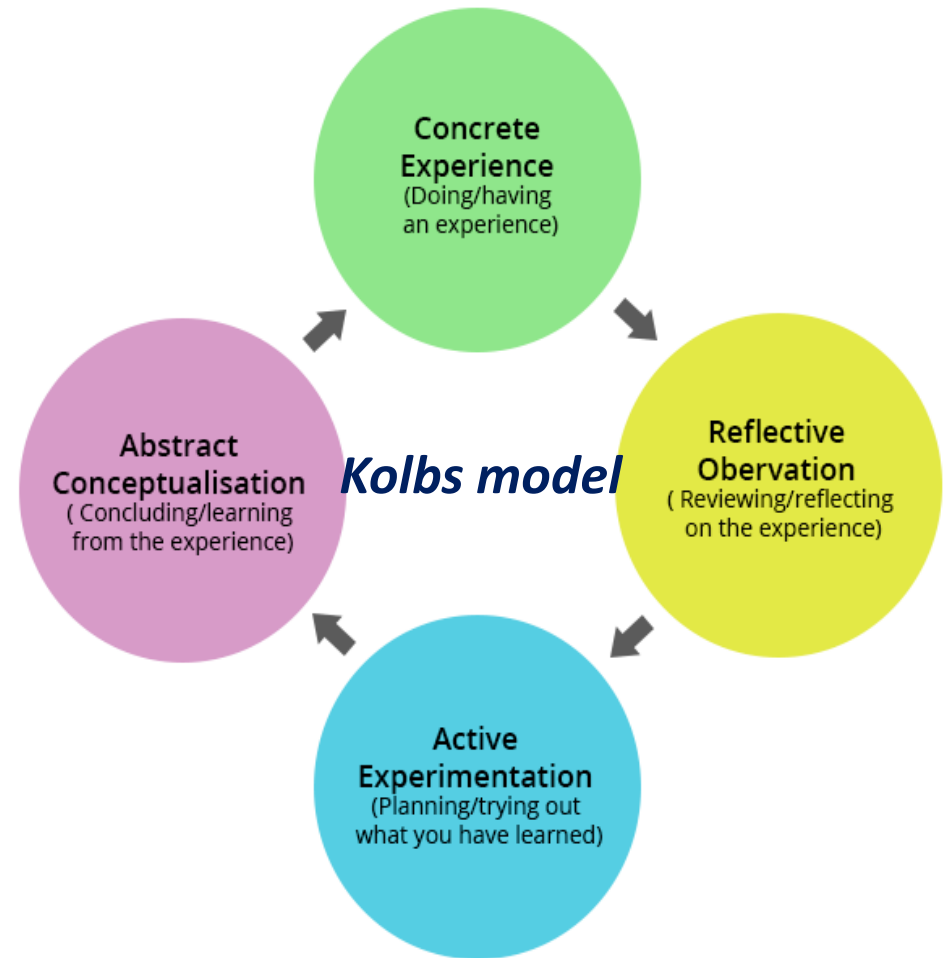


EXTENSION EDUCATION MODELS

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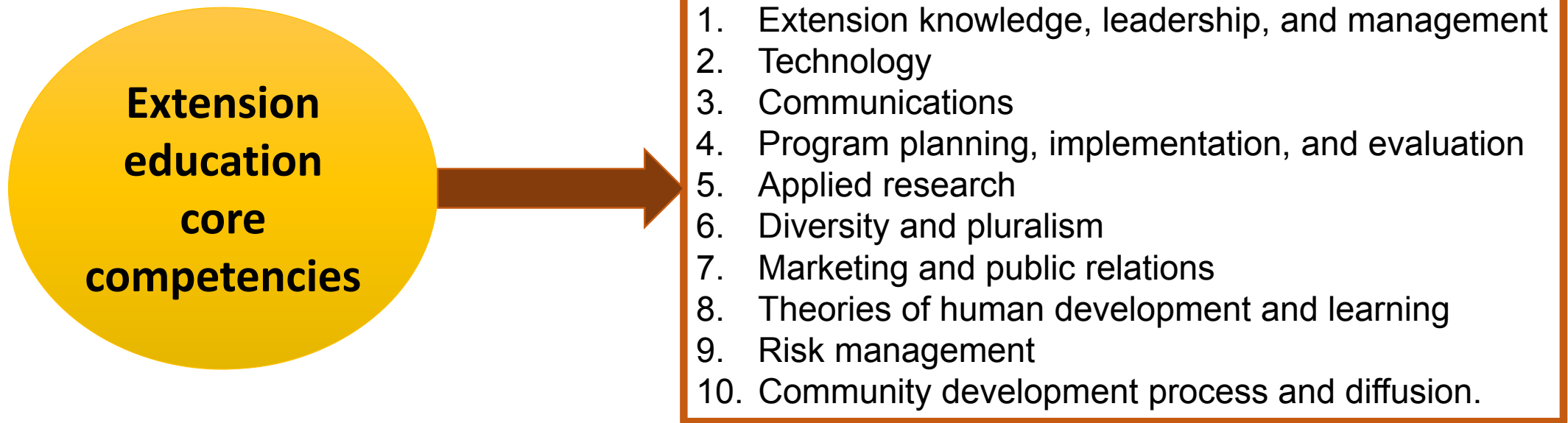
ADDIE Model

of Instructional Design

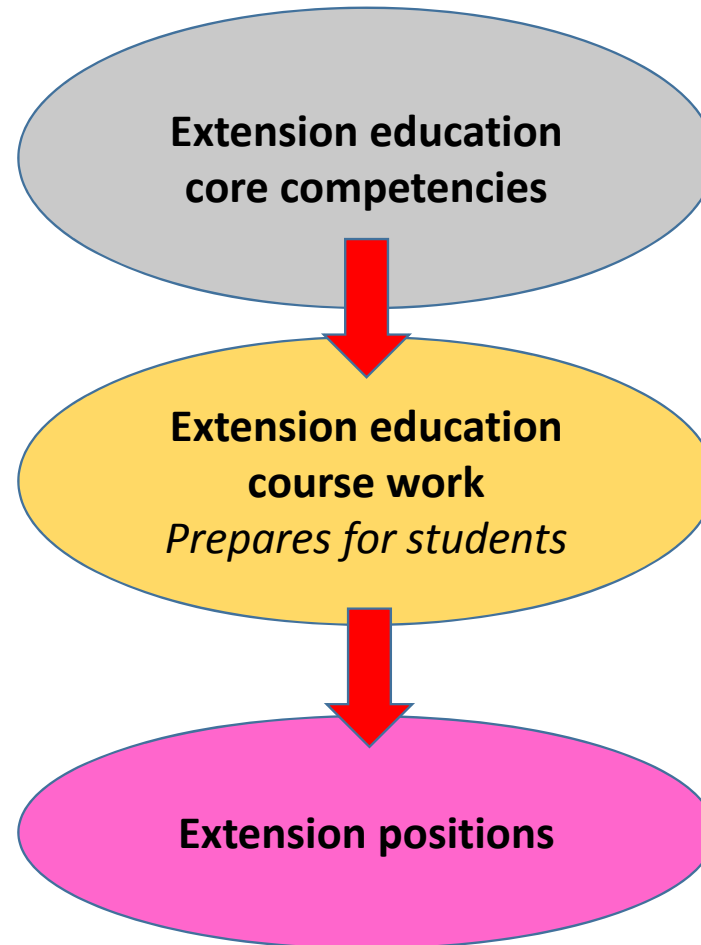


Ohio model of Extension education

- Scott et. al, 2006, ohio university, Columbus
- They focused on providing overall background and knowledge necessary for successful future in extension/ extension related courses



Ohio model of Extension education



AN ASSESSMENT OF EXTENSION EDUCATION CURRICULUM AT LAND GRANT UNIVERSITIES

Undergraduate Level Courses in Extension Education (N = 126)

Amy Harder,et.al.,2009

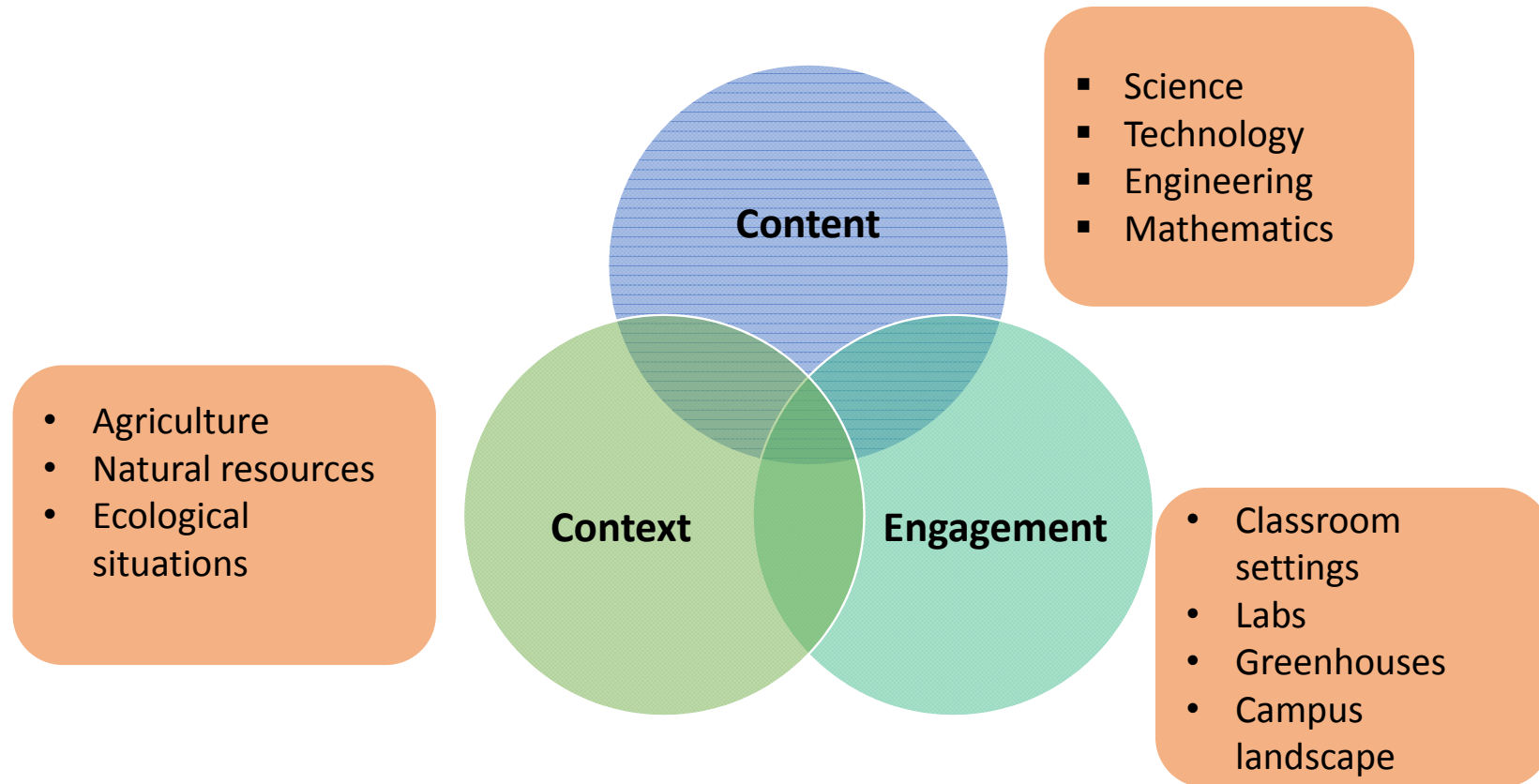
Course category	<i>f</i>	%
Extension knowledge, leadership, and management	37	29.37
Theories of human development and learning	20	15.87
Program planning, implementation, and evaluation	16	12.70
Communications	13	10.32
Internship and practicum	11	8.73
Special topics	7	5.56
Technology	6	4.76
Community development process and diffusion	3	2.38
Directed and independent studies	3	2.38
Natural resources	3	2.38
Applied research	2	1.59
Diversity and pluralism	2	1.59
Marketing and public relations	2	1.59
Miscellaneous	1	0.79
Risk management	0	0.00

MMSAEEC Extension Model

- ❖ Memorial Middle School Agricultural Extension and Education Centre (MMSAEEC)
- ❖ Developed by Peter and Brenda, 2010, Mexico state university
- ❖ It provides youth engagement learning opportunities through project based learning
- ❖ Project ran from 2010-2015
- ❖ More than 10000 youth benefited from this model



MMSAEEC Extension Model



A New Extension Model: The Memorial Middle School Agricultural Extension and Education Center, Peter Skelton & Brenda Seevers, 2010

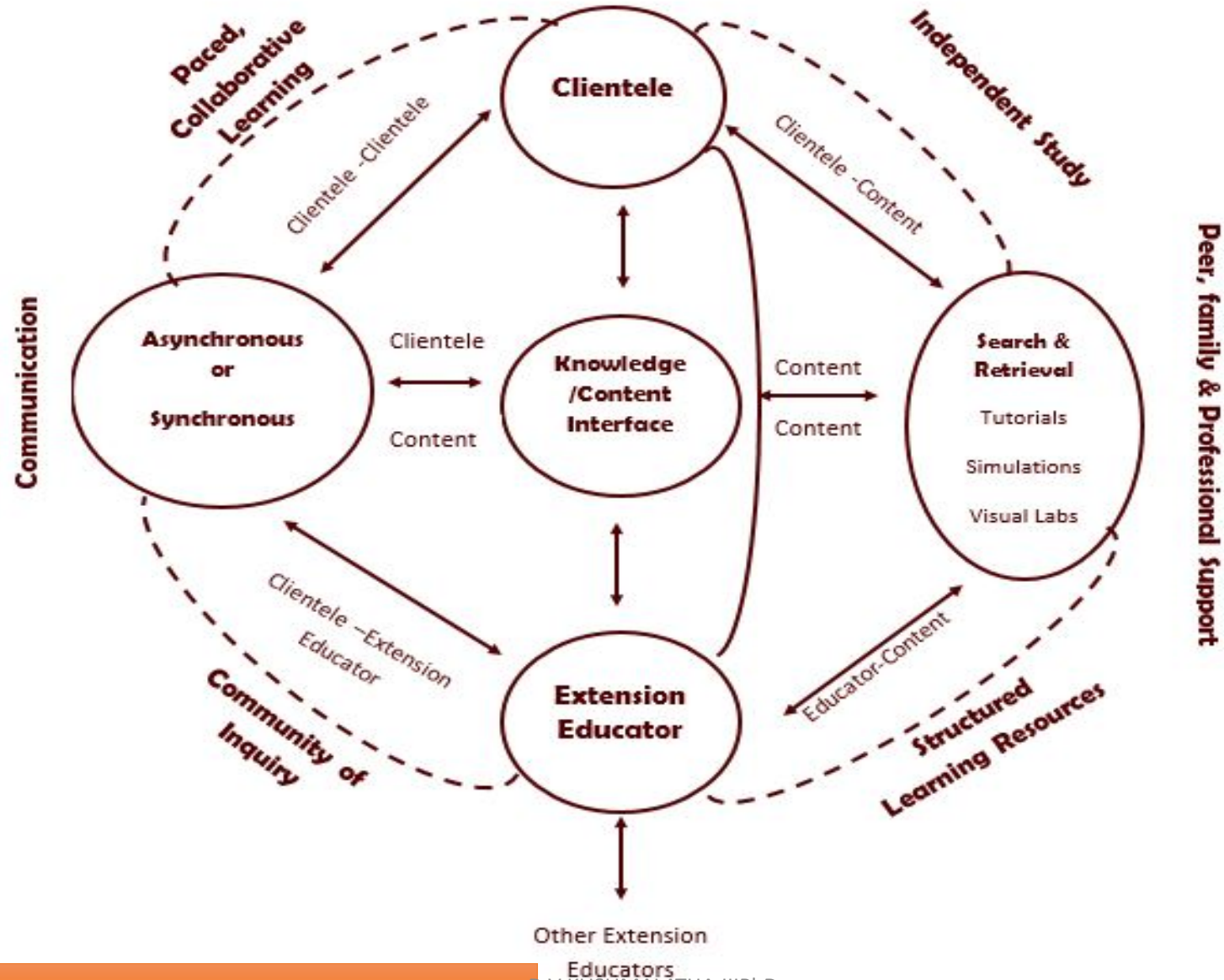
Anderson's Online Learning Model (2011)

Online learning as a subset of distance education has always been concerned with provision of access to educational experience that is, at least more flexible in time and in space as campus-based education

Effective learning environment should have

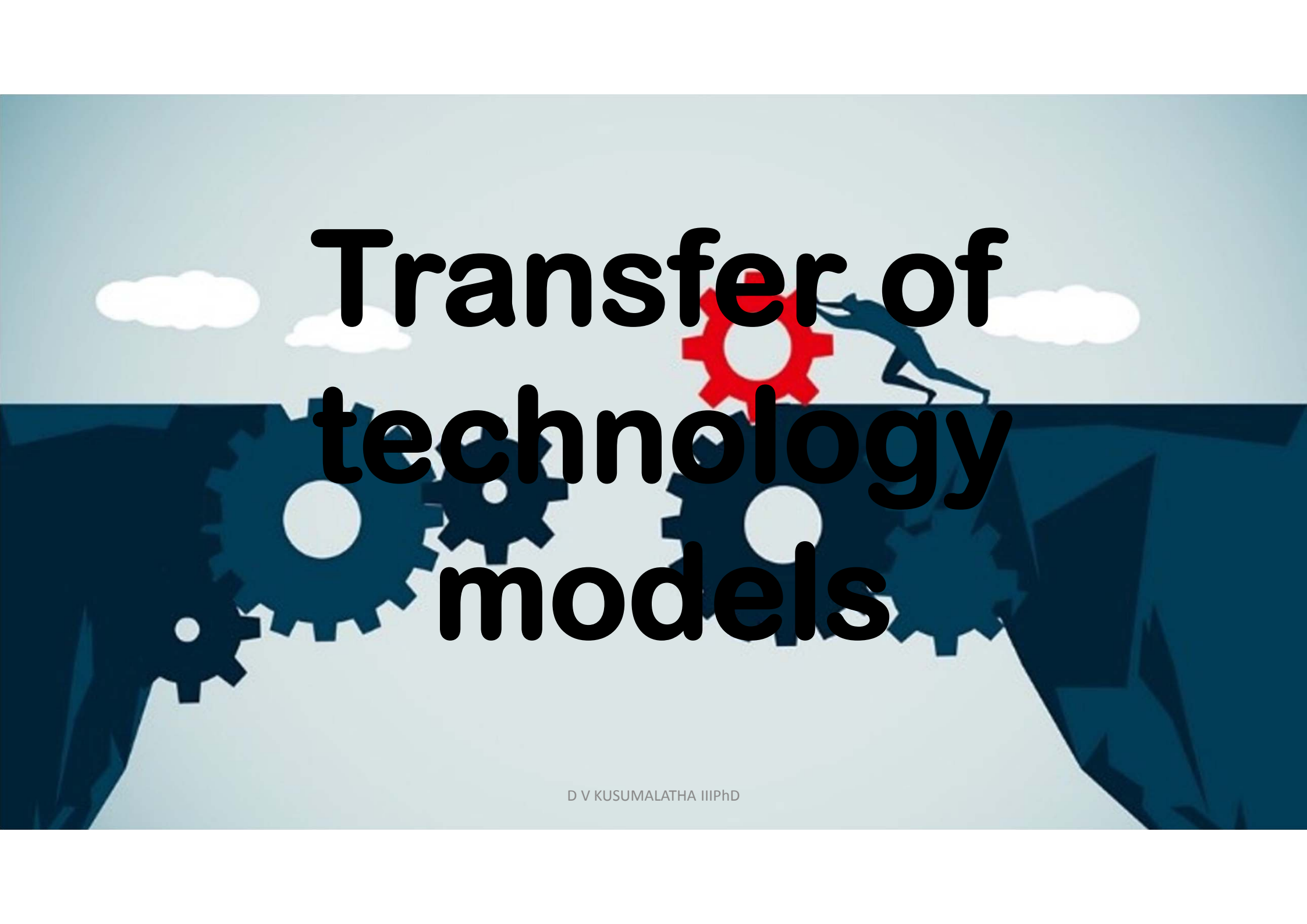
- Learner-Centred
- Knowledge-Centred
- Assessment-Centred and
- Community-Centred.





Anderson's Online Learning Model

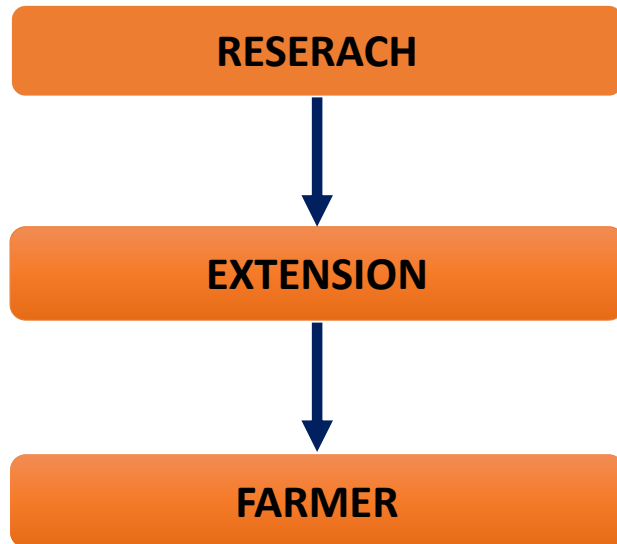
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The background of the slide features a stylized illustration. A dark blue, jagged, mountain-like shape is positioned at the bottom. On top of this shape, there is a series of interlocking gears. Most of the gears are dark blue, but one gear in the center is bright red. A small, dark blue silhouette of a person is shown in a crouched position, pushing the red gear upwards. The sky is a light blue color with a few white, fluffy clouds. The title text is overlaid on this background.

Transfer of technology models

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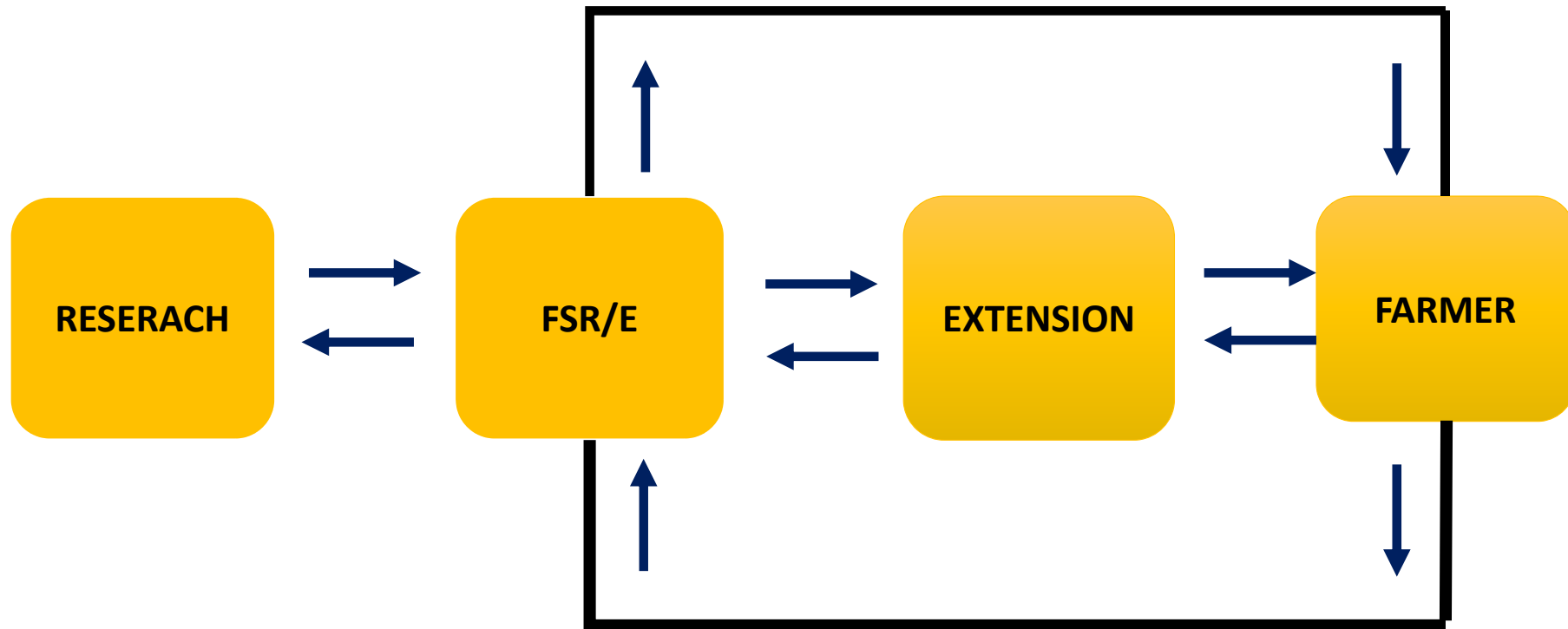
Top-down technology transfer model



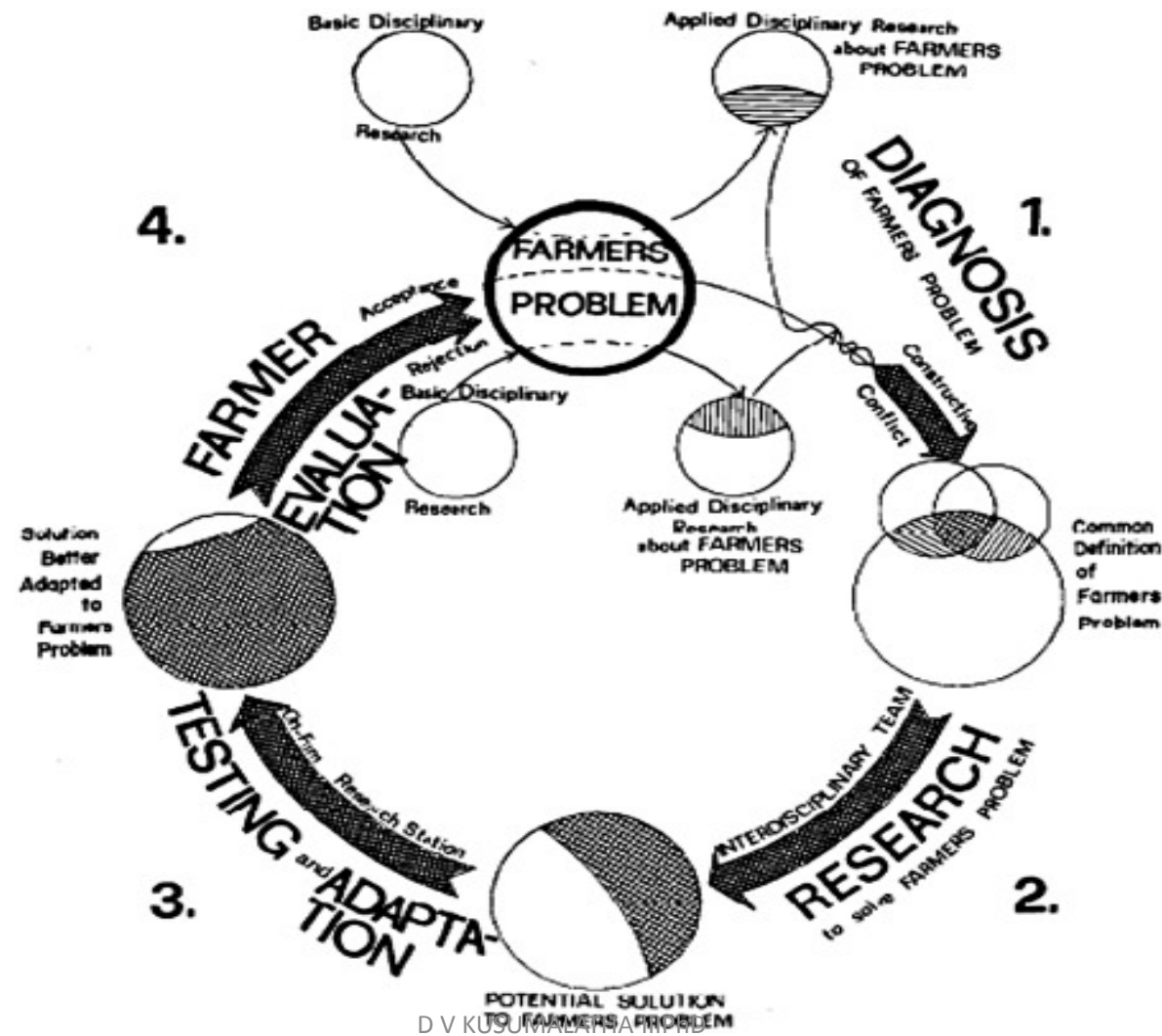
Feedback model

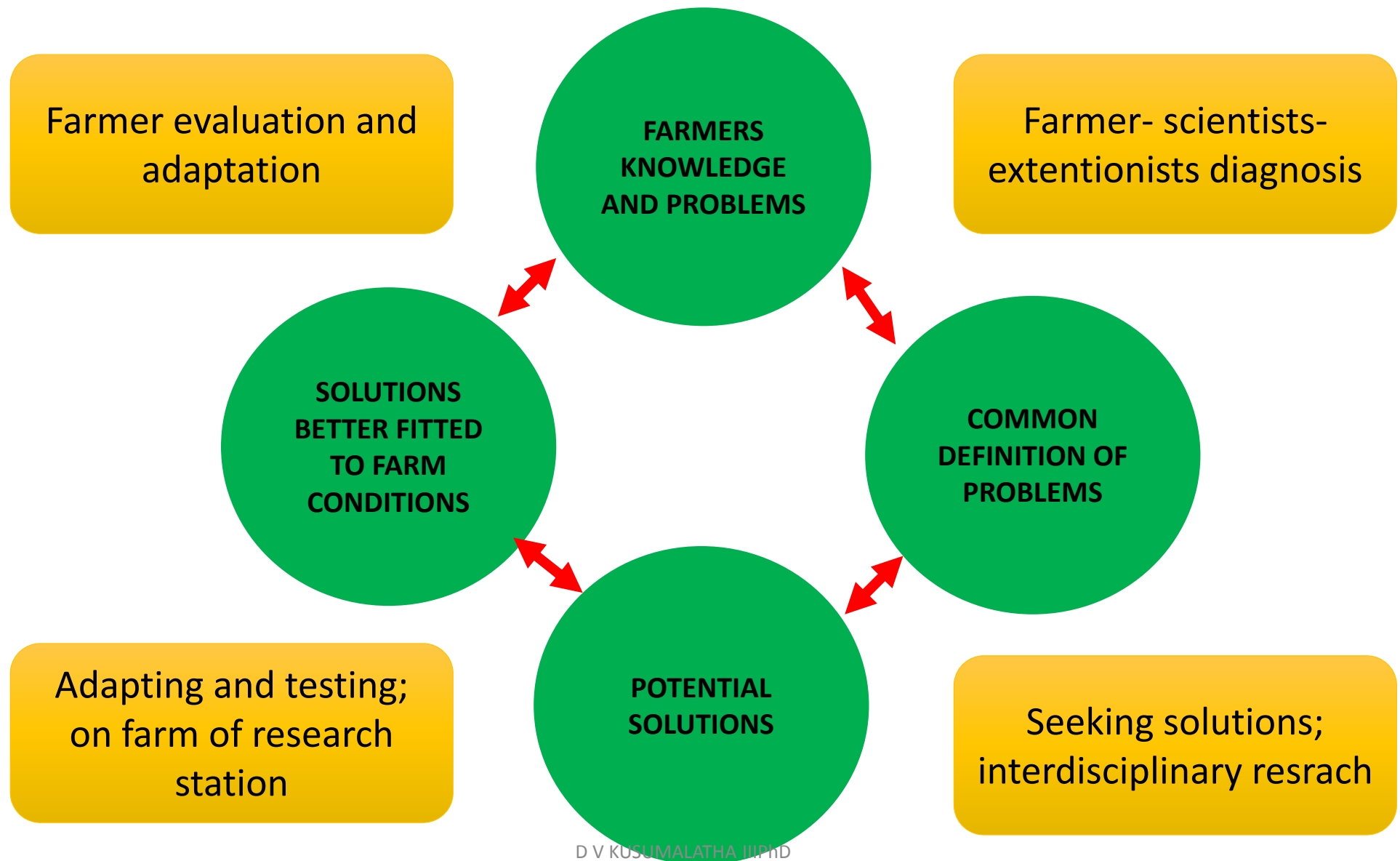


Modified Feedback Technology transfer model



Farmer-back-to-farmer model





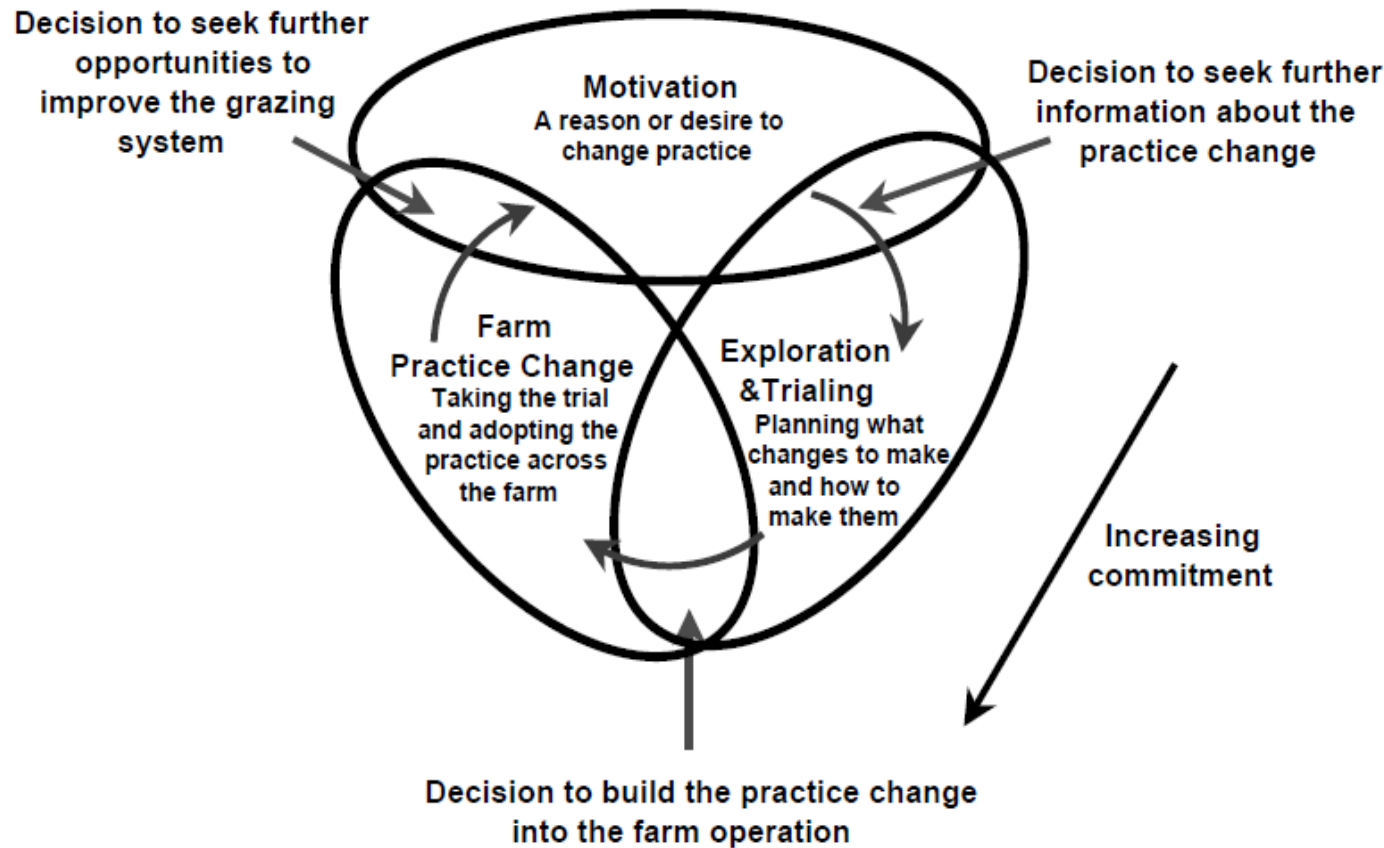
Farmer-First-Farmer-Last (FFFL) Model

- Proposed by Chambers and Ghildyal (1985).
- Research problems and priorities are identified by needs and opportunities of the farm families rather than by the professional preferences of the scientist.
- This model generates varieties of choices to enable farmers to vary, and diversify their farming system.
- This is said to be based on the principle that greater attention needs to be paid to on-farm conditions and that farmers need to play a more active role in agricultural experimentation.

Beyond Farmer First (BFF) Model

- Scones and Thompson (1994)
- It points to where the farmer-first approach lacks certain analytical depth and presents more radical programme that incorporate socio-politically differentiated views of development.
- The model highlights gender, ethnicity, class, age and relation having important implications for research and extension practice.
- It emphasizes that different types of local and non-local people hold many divergent, sometimes conflicting, interests and goals, as well as differential access to vital resources.

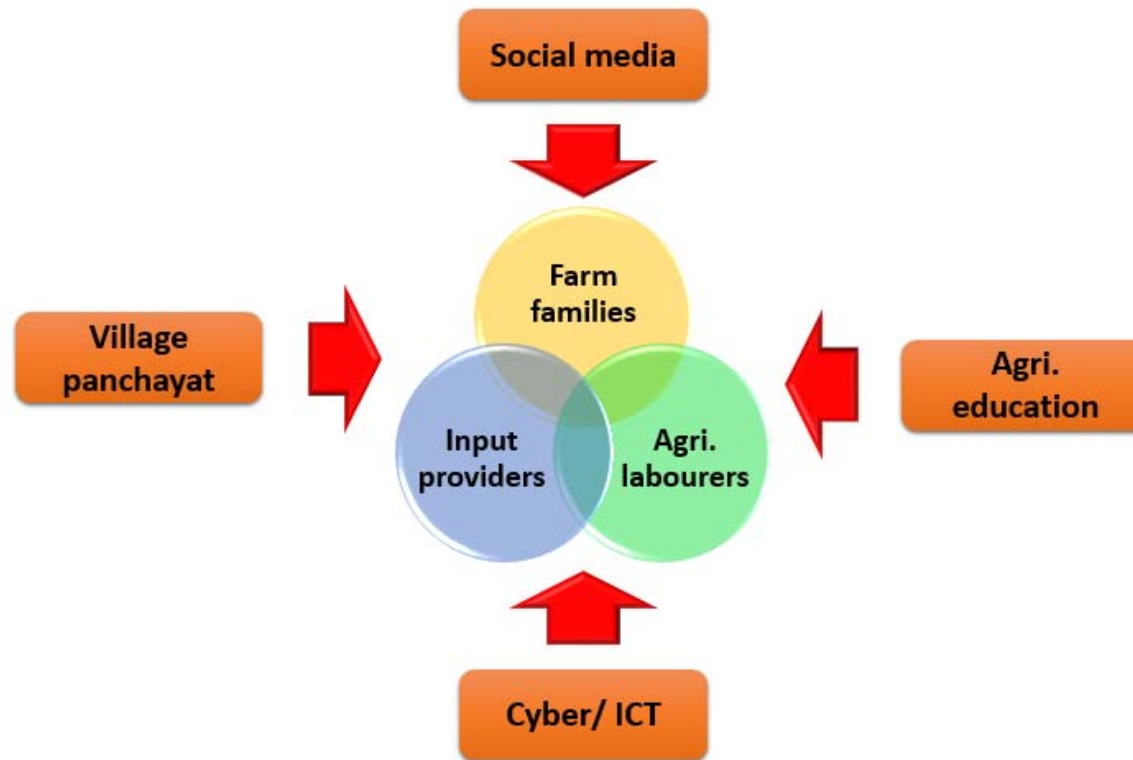
Extension model - Adoption of productive and sustainable practice in high rainfall grazing areas



A research-extension model for encouraging the adoption of productive and sustainable practice in high rainfall grazing areas, C. Nicholson et.al., 2003

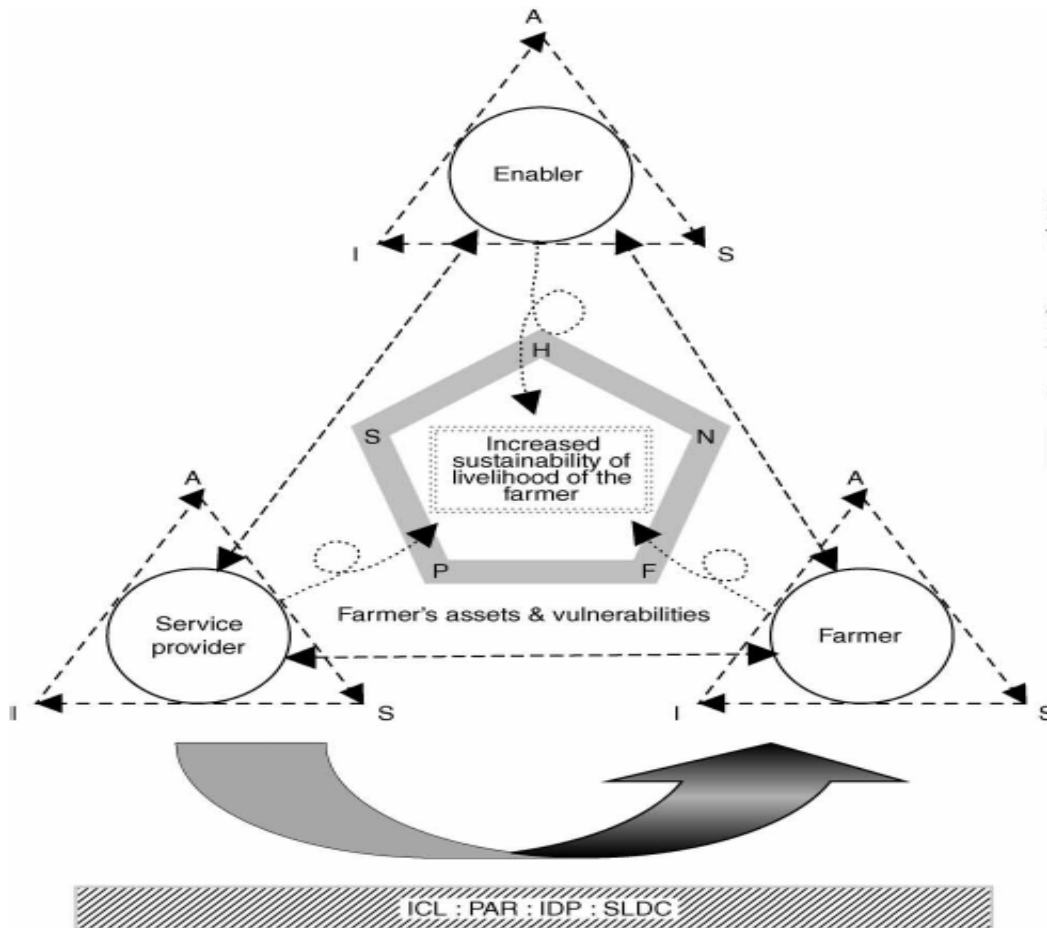
Agricultural Extension Approaches to Enhance the Knowledge of Farmers

Kamalpreet Kaur and Prabhjot Kaur, 2018



Ultimate aim of the extension approaches to disseminate the new technologies to the farmers and to convince them to adopt these ideas for their better development.

Agriflection: A Learning Model for Agricultural Extension



Key

The learning process: Investigation (I) >>> Assimilation (A) >>> Sharing (S)

Assets & vulnerabilities pentagon: **F** = Financial (includes Economic) **S** = Social
H = Human **N** = Natural **P** = Physical



The facilitated learning agenda (Extension Practitioner with Farmer); Theory and Skills in

- ICL: Individual and collective learning
- PAR: Planning, action and reflection
- Iterative Development Pathways
- SLDC: Sustainable livelihoods and development concepts

Extension Program Planning Models

01



03



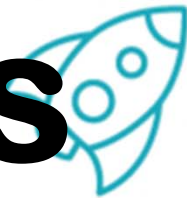
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02



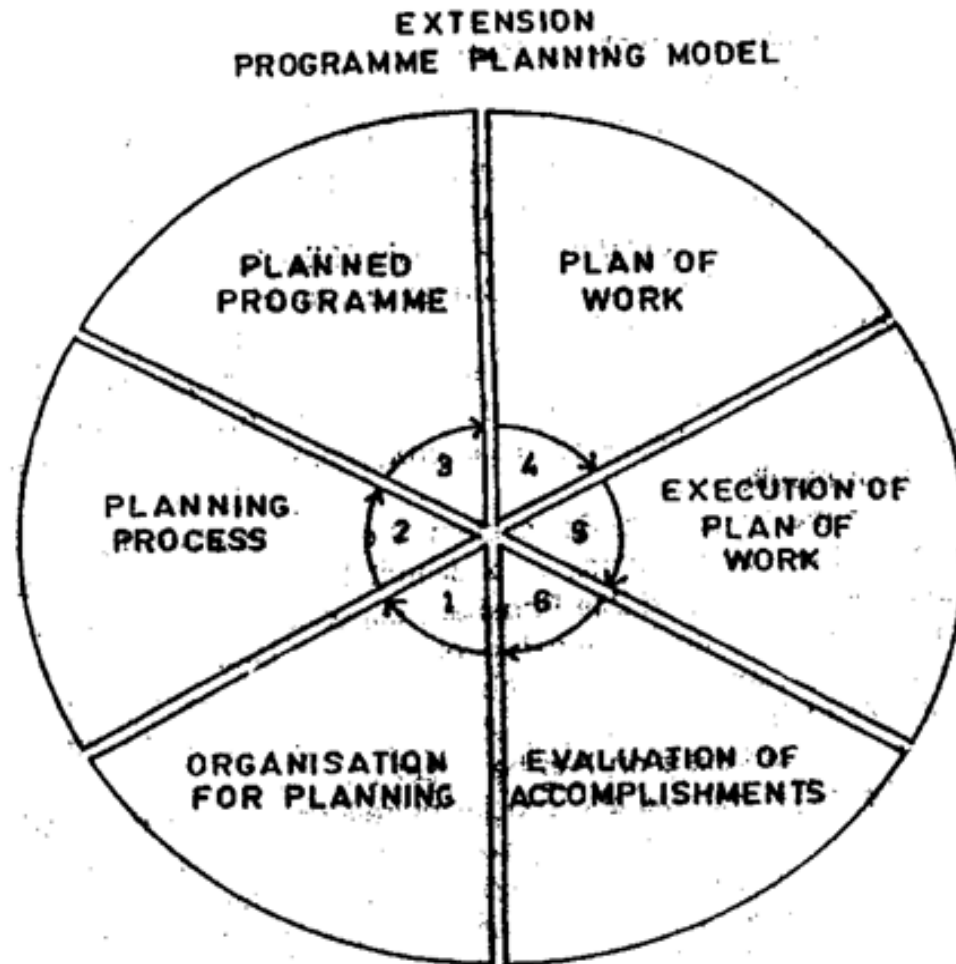
04



- ➔ Most efficient return on investment of public funds for accountability purposes
- ➔ Encourages greater efficiency in providing solutions to client problems
- ➔ Allows extension personnel a greater range for flexibility and adaptability.



EXTENSION PROGRAMME PLANNING MODEL – SANDHU (1965)



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The contingency based program planning model

Directive approaches

Time and funding is limited and urgency implementation of program

Director

Non-Directive approaches

Learner develop their own goals (Action problem based, self-directed)

consultant

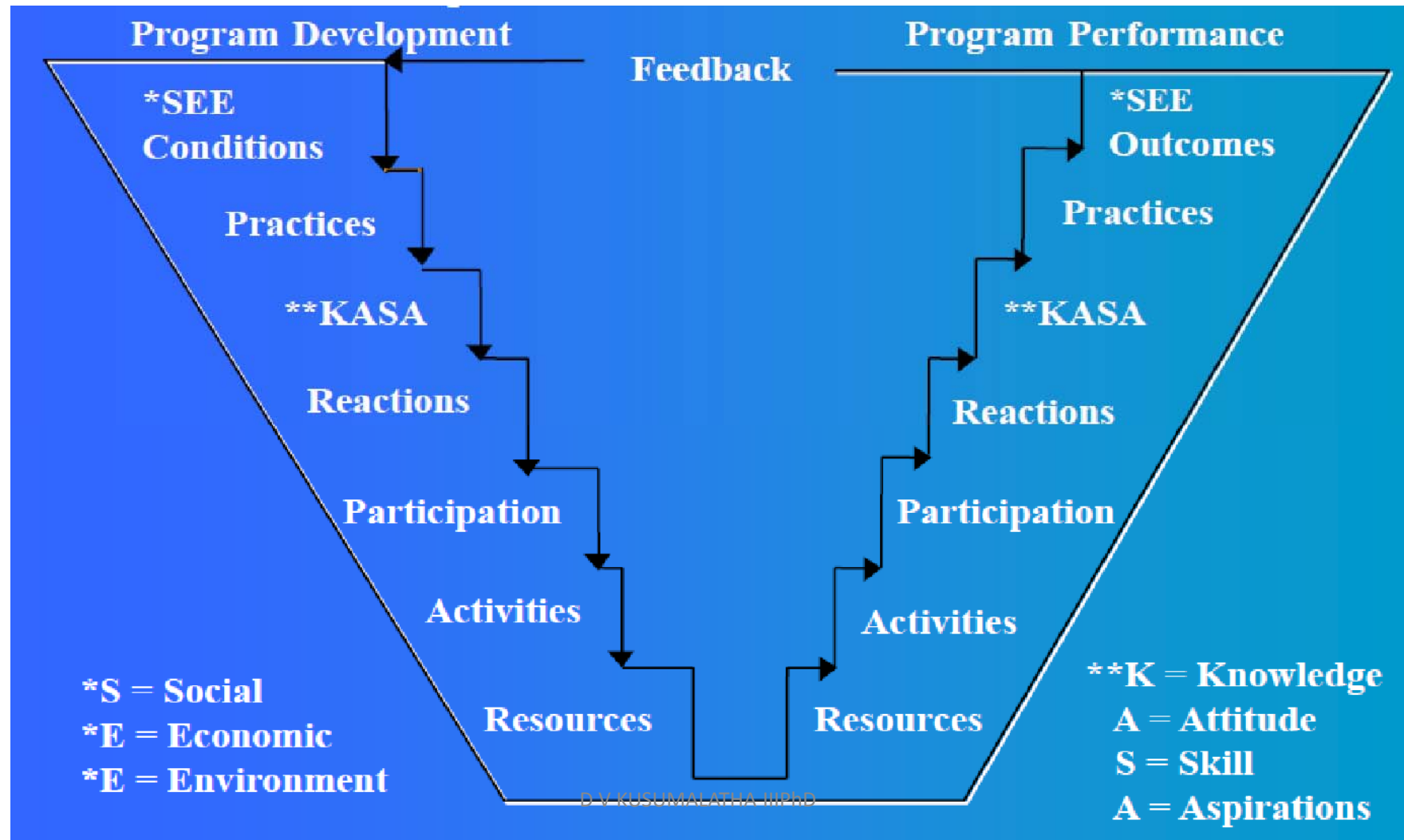
Collaborative approaches

Participation of all stakeholders

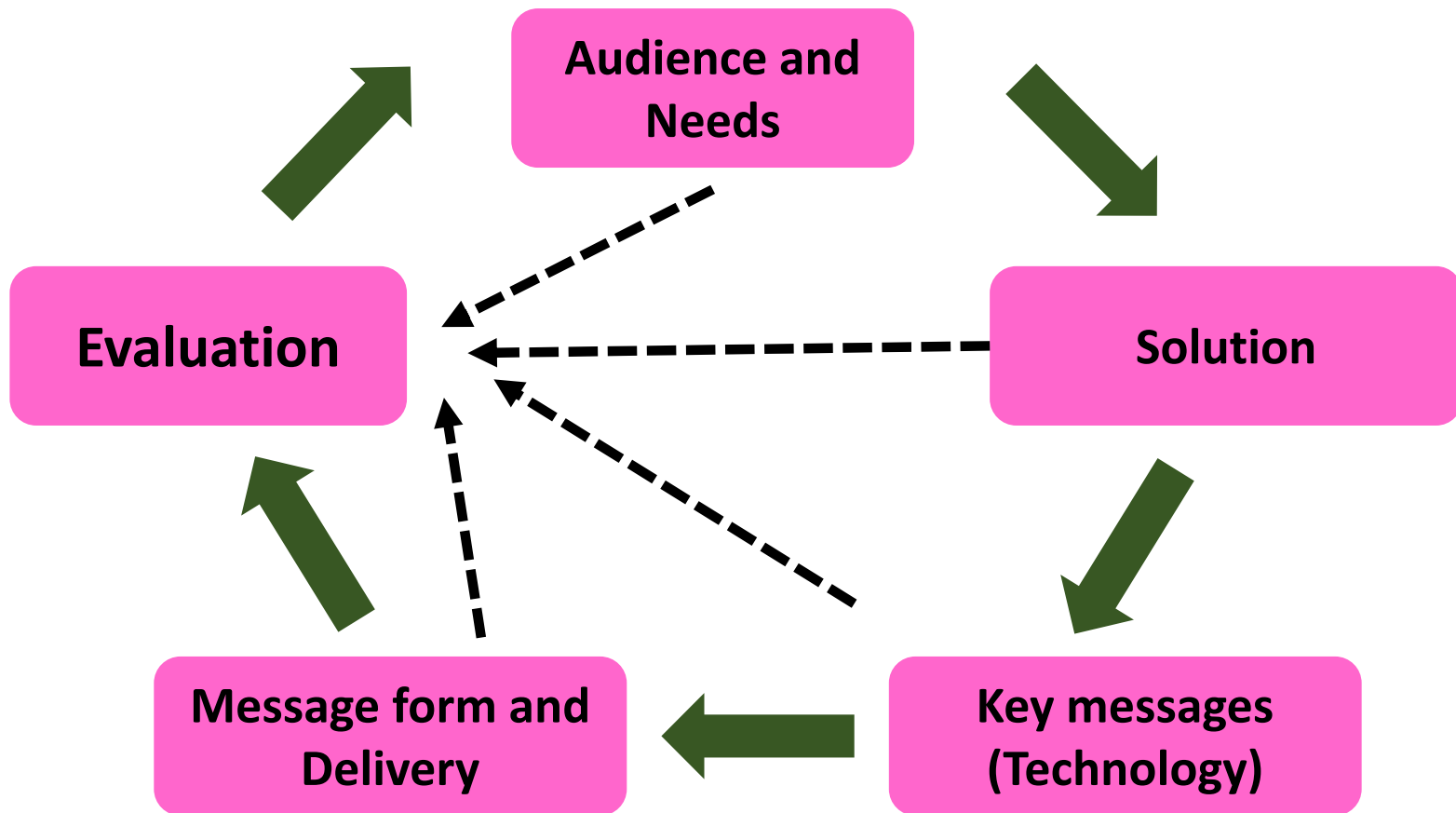
facilitator

Targeting Outcomes of Programs (TOP) Model

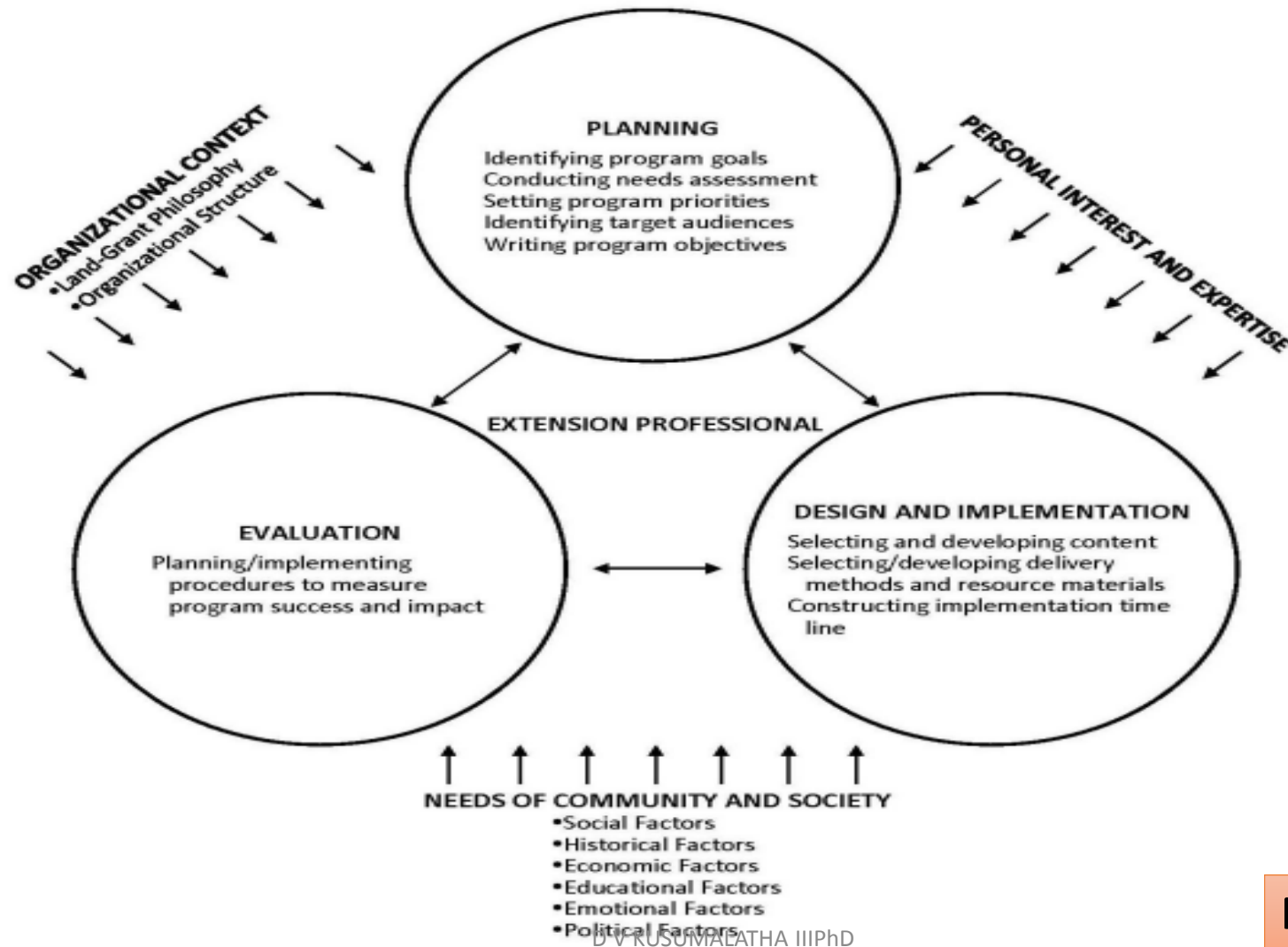
1994 by Claude Bennett and Kay Rockwell



ASK ME Extension model



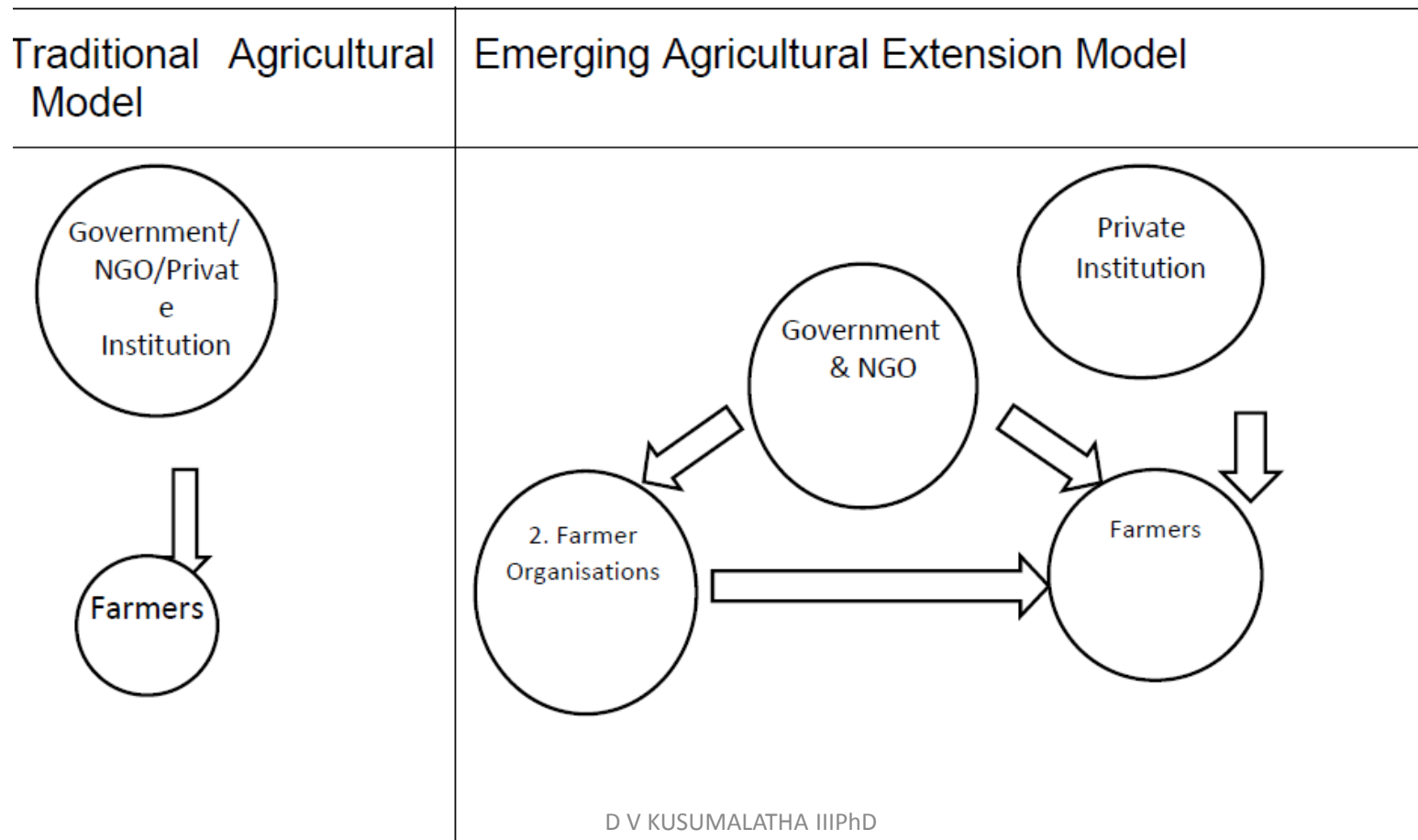
Cooperative Extension Program Development Model



Nancy et al, 2015

Changing Agriculture Extension Models in Pacific Island Countries

Chand and Kumar (2019)



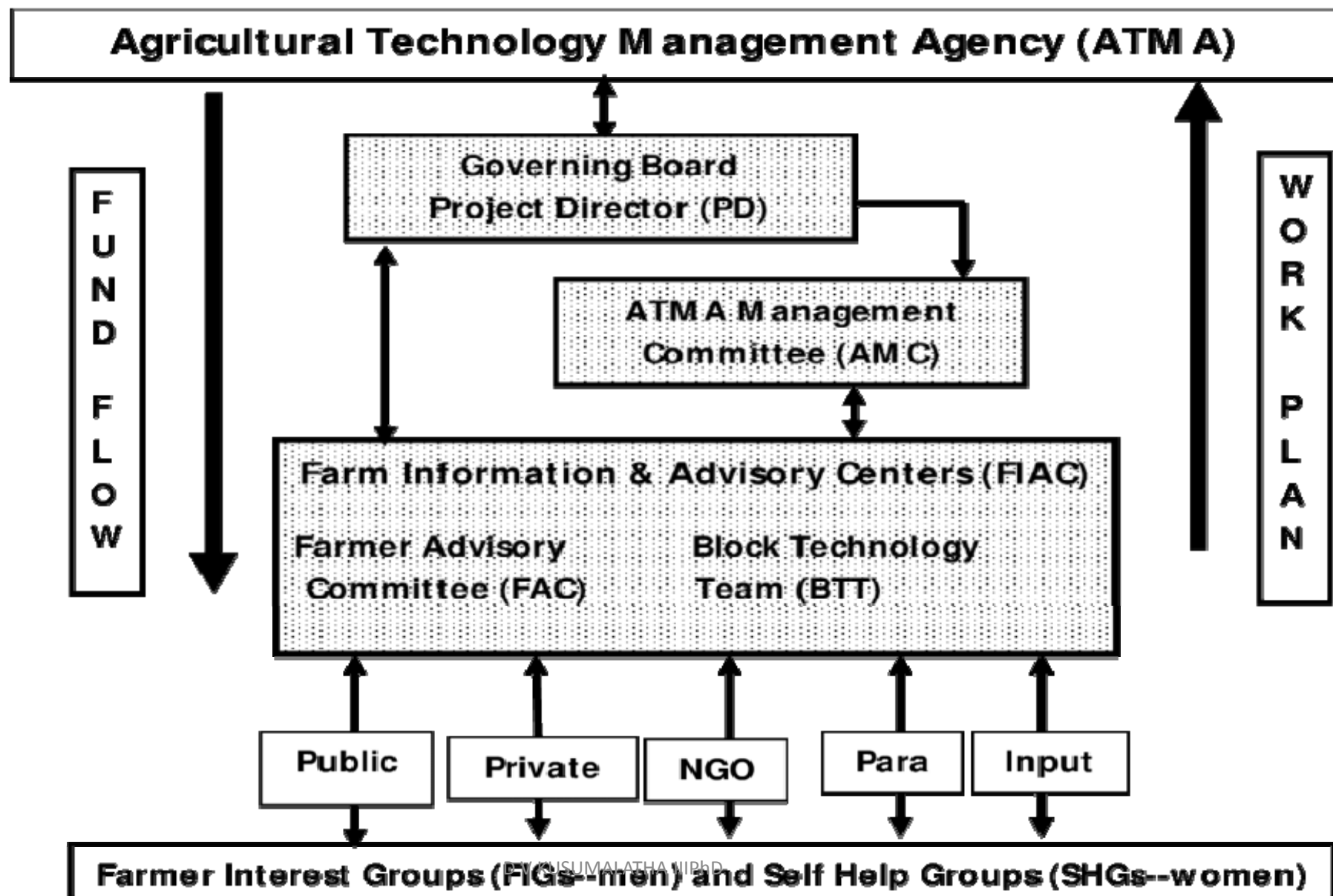


Extension models in India

ATMA model

The National Agricultural Technology Project (NATP) was initiated in India with World Bank support in year 1998 and phase wise ATMAAs were established in pilot project districts.

1. Decentralize decision making to the district level
2. To increase farmer input into programme planning and resource allocation especially at the block level and increase accountability to stakeholders
3. To increase programme coordination and integration



Agricultural Technology Management Agency (ATMA): A Study of its Impact in Pilot Districts in Bihar, India

K.M.Singh et.al

2005

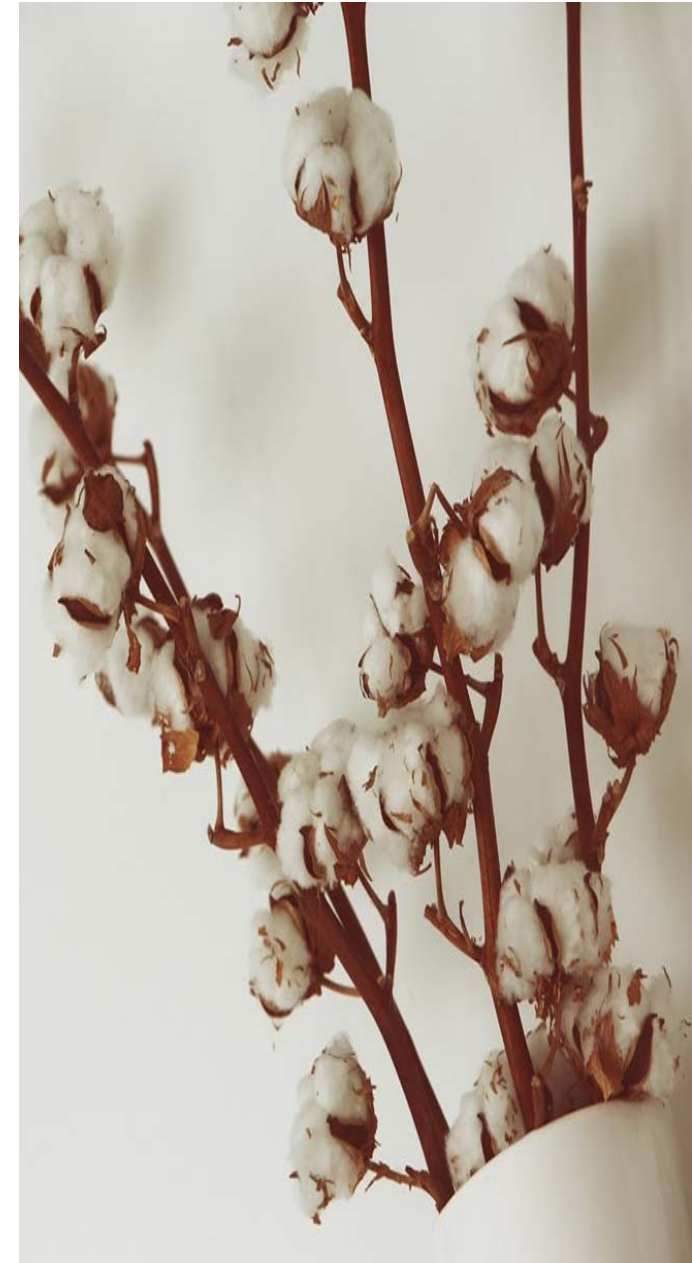
Percentage Interface between farmers with extension officers and scientists

Particulars	Project districts			Non-project districts		
	Baseline	Current	Change	Baseline	Current	Change
A. Farmers visiting: different extension officers and scientists						
Village Extension Workers	10.28	28.72	18.44	6.81	12.12	5.31
Block level line department Officers	13.82	50.35	36.53	1.51	10.61	9.1
District level line department officers	3.90	26.95	23.05	0	9.09	9.09
NGO	0.00	6.38	6.38	0	0	0
Extension staff of agri-business firms.	11.70	29.43	17.73	2.27	36.36	34.09
Scientists of KVK/SAU/ZRS	10.28	31.20	20.92	2.27	3.78	1.51

Appachi's Integrated Cotton Cultivation: Innovative Model

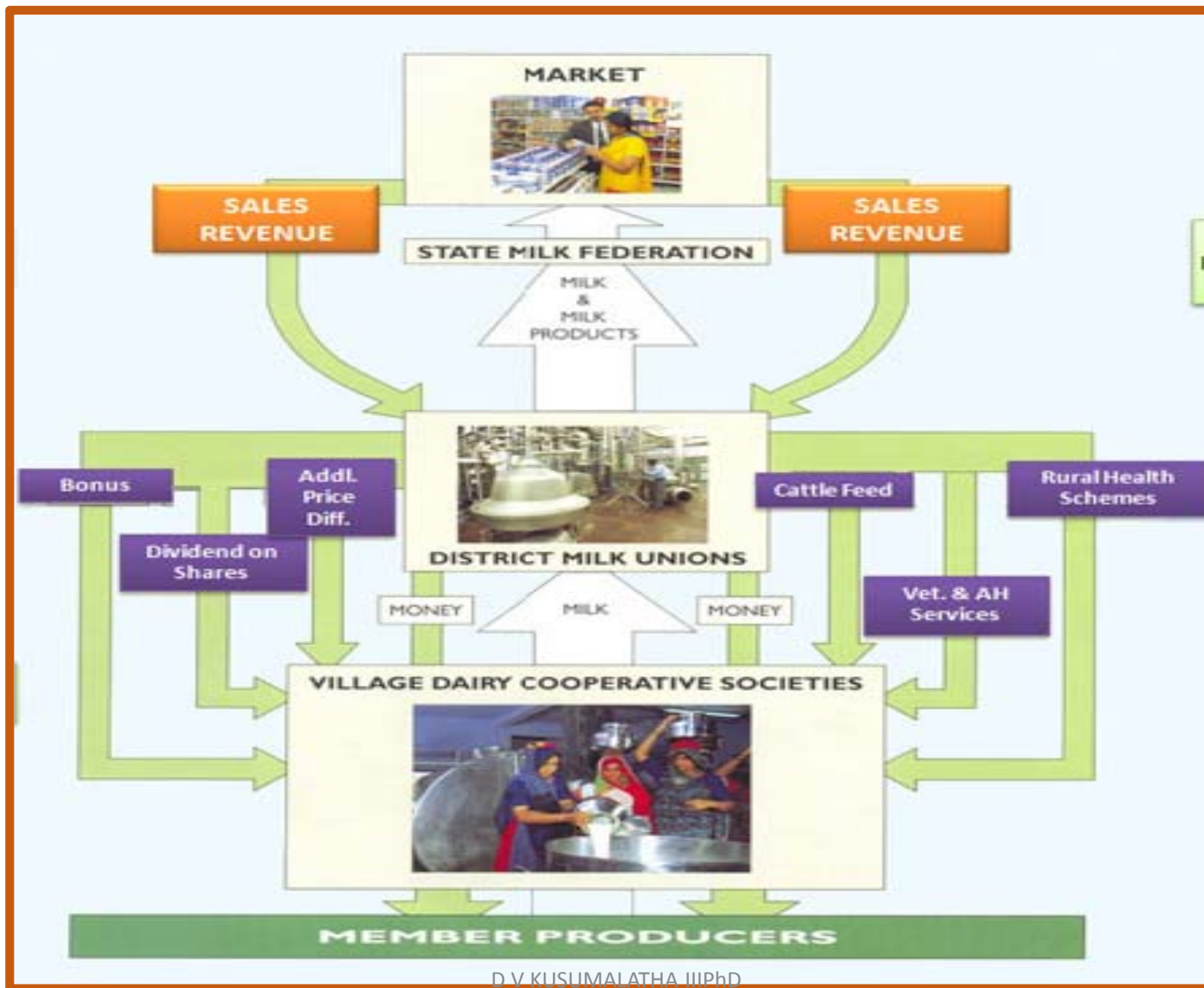
- ❖ Appachi Cotton Company (ACC), the ginning and trading house from Pollachi (Coimbatore district of Tamil Nadu, India)
- ❖ It encourage farmers to sow cotton seeds in their fields.
- ❖ During the 2002 *kharif* season, about 950 acres of land in various blocks of Coimbatore (Pollachi and Kinathukadavu), Theni (Bodi and Andipatti) and Nammakal (Thiruchangode) districts of Tamil Nadu were contracted, involving 900 farmers.
- ❖ During the season, the contracted farmers witnessed a remarkable reduction (by 25%) in cost of cultivation.

- One village, one group (SHG)
- One village, one variety/hybrid of cottonseed
- Crop loan at 12% per annum on Group's guarantee
- Door delivery of quality inputs at discounted rates
- Cotton crop insurance
- Integrated crop management through competent Farm Service Centres
- Contamination control measures from farm to factory
- Assured buyback of final produce from farmers' doorsteps
- The sponsor (ACC) plays the role of a perfect coordinator/facilitator between the producer and the consumer.





COOPERATIVE MODEL

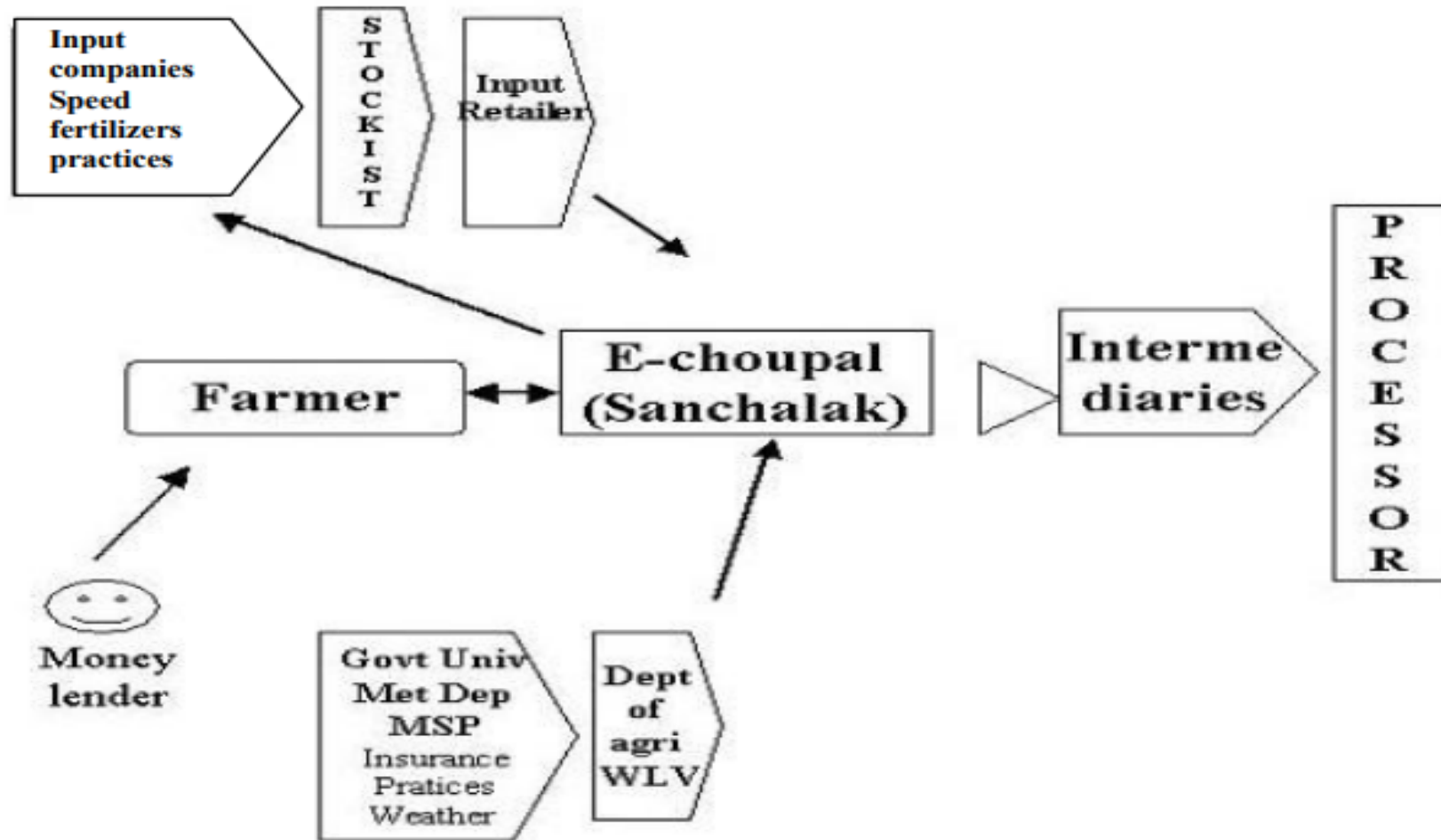


A CASE STUDY OF AMUL CO-OPERATIVE IN INDIA IN RELATION TO ORGANIZATIONAL DESIGN AND OPERATIONAL EFFICIENCY

Ruchira Prasad and Rupali Satsangi (2013)

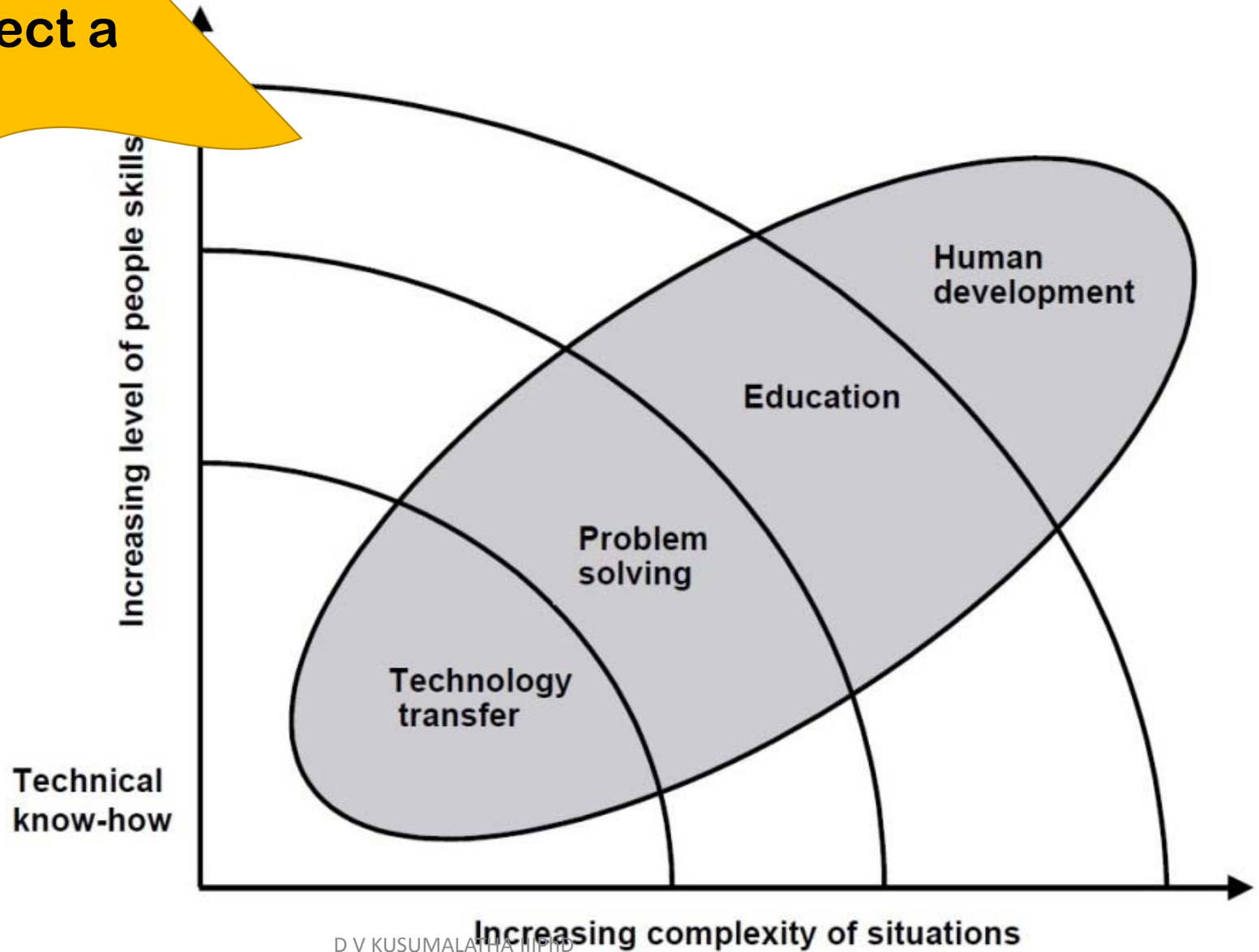
- According to the study conducted it was found that the revenue has increased from Rs.2218.52 to Rs.8005.36.
- The exports have also gone up by 50% and the foreign exchange earnings have crossed a mark of Rs. 100 crores. Amul is the no.1 most popular brand in the country and in this process the organizational design has been instrumental.
- survey indicates approximately 80% of the employees report that the operational efficiency is the outcome of the dynamic organizational structure of Amul.

e-Choupal model

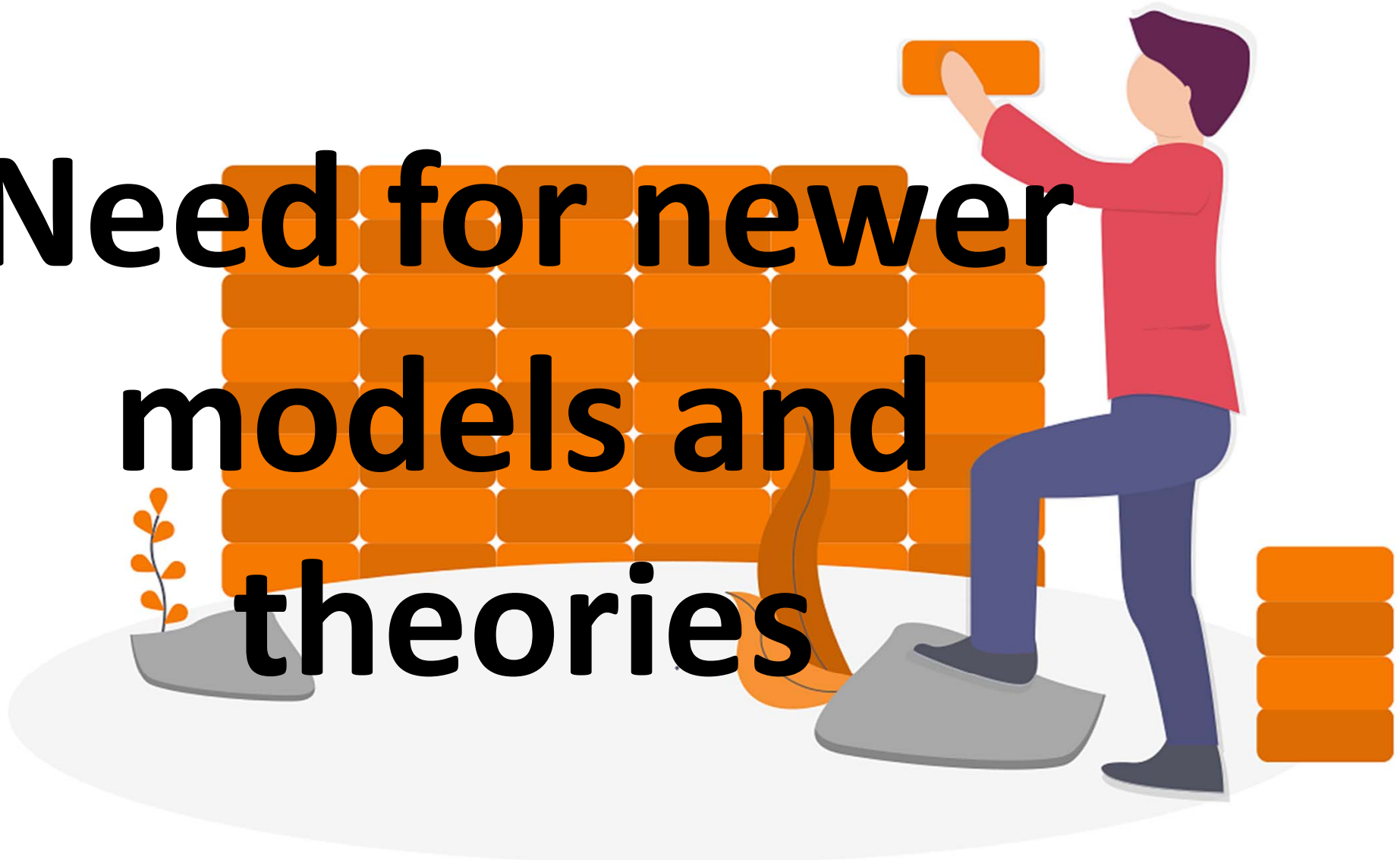


How to select a model

No one strategy or model is usually sufficient but a combination of two or more is more likely to be complimentary and necessary to fulfil the aims of extension.



Need for newer models and theories



Reformulating The Agriculture Extension System

R.Dwarakinath, 2009

- ✓ Purpose in farming is changing
- ✓ Urban demands and changing life styles increased on rural land based resources
- ✓ Literacy levels are rising, and exposure to urban life is deeply impacting the rural life styles
- ✓ Improve livelihoods of the farm population.
- ✓ “Technology push” justifying but “extension push” is missing

Reverse Extension

Dr. R.M.Prasad argued there is a need to relook at the concept of extension education being preached and practiced today and he defined it as reverse extension.

Reverse extension offers one way of reinventing its future

Why we need newer models

Categorical

**Socio-
organisational**

Managerial

Situational

Categorical

- It still remains alienated from various stakeholders who support and sustain development process.
- There are even instances where the need of extension service is doubted by the end users.

Socio-organisational

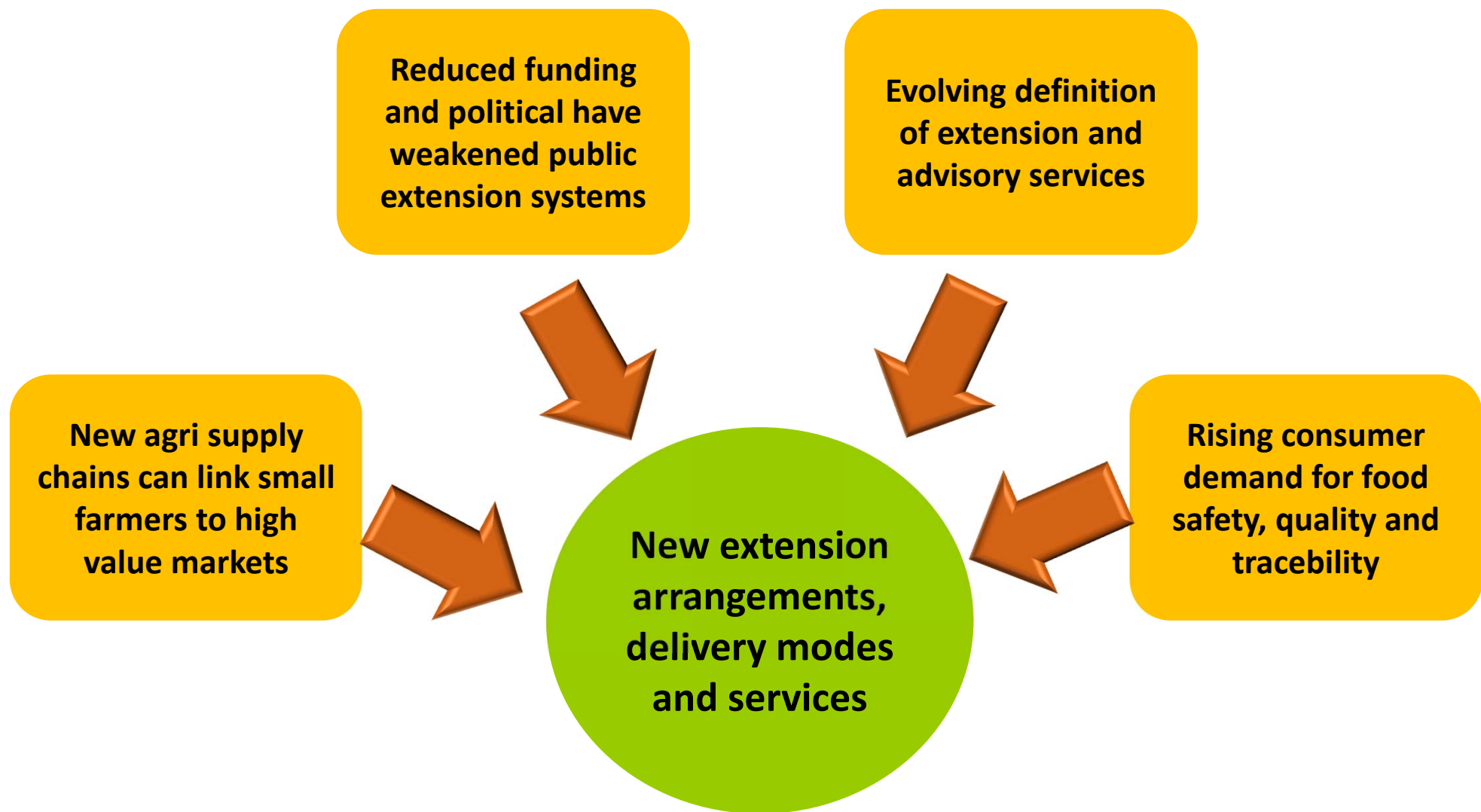
- Support for public extension and accountability is declining and the efficiency of services by public extension is often questioned

Managerial

Inefficiency of extension system in India is often attributed to the poor governance of extension service. It facing *Demographic, Management, Professional, Technological, Economic and ecological challenges*

Situational

There is changing scenario of development for sustainability



EXTENSION
NEEDS NEW
THEORIES/
FRAMEWORK
TO MOVE
FORWARD

➤ **Beyond diffusion of innovations**

(New look on innovations; use of multiple sources of knowledge; extension as a co-learning process)

➤ **Beyond linear ToT (R-E-F-inkages)**

(Credit, Marketing, Product development linkages needed)

➤ **Beyond technological interventions**

(institutional innovations and value chains)

➤ **Beyond existing institutions and practices**

(Farmer companies, Agribusiness incubators)

➤ **Beyond allocation based targets and achievements**

(Outcome based targets and achievements)

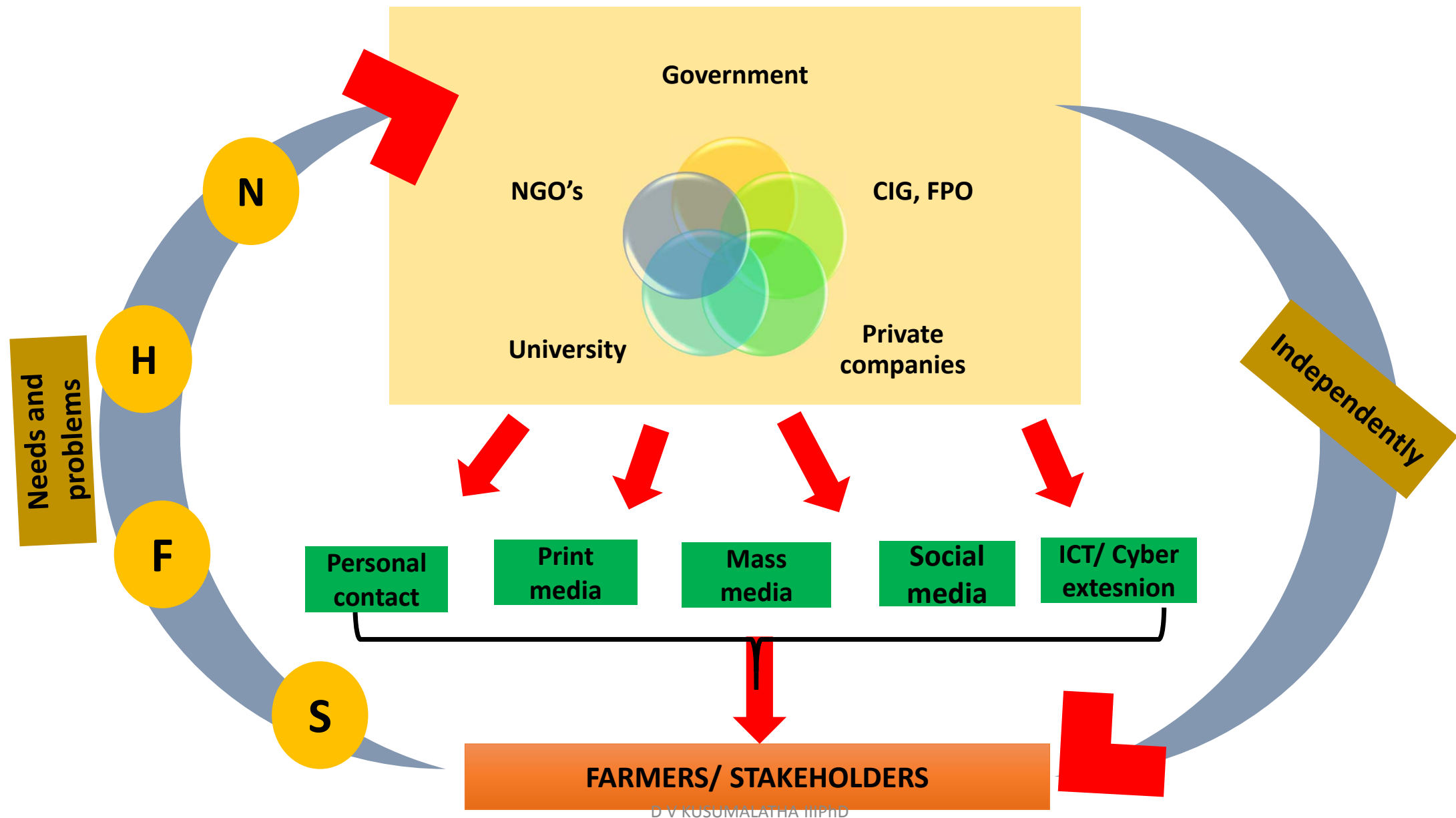
➤ **Beyond networks**

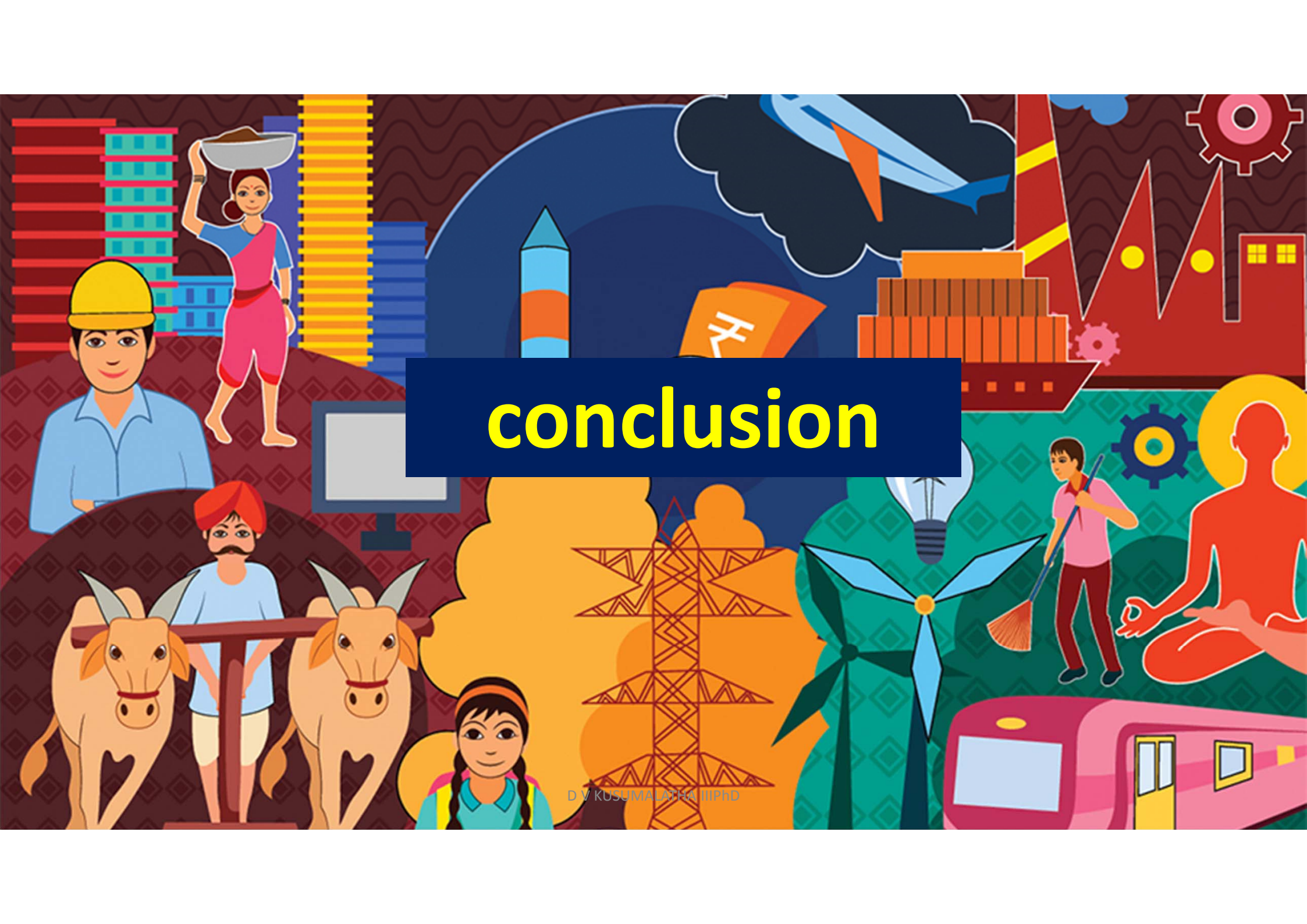
(Convergence and partnerships at several levels)



PROPOSING A MODEL

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conclusion

A vibrant magenta background featuring delicate pink cherry blossoms and buds on dark, thin branches. The flowers are in various stages of bloom, with some fully open and others as buds. The overall aesthetic is soft and celebratory.

THANK YOU...

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