

International Journal of Agriculture Extension and Social Development

Volume 9; Issue 2; February 2026; Page No. 223-226

Received: 20-12-2025
Accepted: 05-02-2025

Indexed Journal
Peer Reviewed Journal

An analysis of constraints affecting the adoption of agricultural skill development training outcomes

¹DN Padaliya, ²SF Paghadar and ³JV Chovatia

¹Assistant Professor, Polytechnic in Agriculture, JAU, Dhari, Gujarat, India

²Assistant Professor, Polytechnic in Agriculture, JAU, Dhari, Gujarat, India

³Assistant Professor, Department of Extension Education, JAU, Junagadh, Gujarat, India

DOI: <https://www.doi.org/10.33545/26180723.2026.v9.i2c.3043>

Corresponding Author: DN Padaliya

Abstract

The study examined the constraints perceived by beneficiaries in the adoption of Agricultural Skill Development Training Programme outcomes. Findings indicated that beneficiaries encountered a range of personal, socio-economic, institutional and technical constraints that influenced the effective utilization of acquired skills. Major personal constraints included lack of adequate time for practicing learned skills and limited confidence in adopting new technologies. Socio-economic constraints such as insufficient capital, small and fragmented landholdings, and limited access to credit facilities were perceived at a medium to high level by a majority of beneficiaries. Institutional constraints were primarily related to inadequate follow-up support, irregular extension contact, and limited availability of inputs at the local level. Technical constraints included complexity of recommended practices, lack of locally suitable technologies, and inadequate hands-on training exposure. Overall, the study revealed that although beneficiaries possessed moderate psychological readiness, multiple interlinked constraints significantly restricted the translation of training inputs into practical adoption. Addressing these constraints through strengthened extension support, need-based training design, and improved institutional linkage is essential for enhancing the effectiveness of Agricultural Skill Development Training Programmes.

Keywords: Training, socio-economic, skill, stakeholders

Introduction

Training is universally recognized as a foundational mechanism for enabling the efficient transfer and application of agricultural technologies within farming systems. Its role extends beyond information dissemination to fostering practical competence, adaptive capacity and informed decision-making among farming communities. Consequently, the systematic assessment of institutional training programmes particularly those delivered through Farmer Training Centres (FTCs) assumes critical importance in understanding their effectiveness, relevance and long-term influence on farmers' professional practices and livelihood outcomes.

In the Indian context, the formalization of farmer-oriented training interventions can be traced to the Etawah Pilot Project initiated in 1948, which marked a significant milestone in the evolution of organized agricultural extension. This initiative laid the groundwork for structured capacity-building approaches by integrating training as a core component of rural development and technology dissemination strategies. Since then, farmer training has remained central to extension systems aimed at accelerating agricultural modernization and improving productivity.

Training is inherently a continuous and transformative process that contributes to the holistic development of individuals by strengthening cognitive abilities, enhancing

psychomotor skills and shaping affective attributes such as attitudes and motivation. Within agricultural and rural development frameworks, training programmes are designed as organized learning experiences that promote the acquisition of technical knowledge, skill enhancement, analytical reasoning and problem-solving capabilities. These programmes typically employ participatory and experiential learning methodologies to ensure that learning outcomes are contextually relevant and practically applicable.

Effective agricultural training is generally characterized by the integration of four interrelated elements: conceptual clarity of subject matter, exposure to expert knowledge and demonstrations, opportunities for hands-on practice under real or simulated field conditions, and reinforcement through structured feedback and follow-up support. The synergy of these components is essential for translating theoretical understanding into sustained behavioral change and improved occupational performance.

Lynton and Pareek (1990) viewed training as a purposeful developmental intervention aimed at instilling, strengthening and refining desirable competencies, attitudes and behavioral patterns. From this perspective, the design and delivery of a well-articulated training curriculum become crucial in ensuring measurable improvements in participants' technical efficiency and adaptive capacity. In India, diverse training programmes have been implemented

to address the needs of rural households, small and marginal farmers and socio-economically vulnerable groups, with a broader objective of fostering innovation adoption, enhancing self-reliance and strengthening entrepreneurial readiness in the agricultural sector.

One notable capacity-building initiative in this context is the Agricultural Skill Development Training Programme implemented under the Gender Audit Programme, which seeks to strengthen farmers' technical and managerial competencies through structured exposure to improved crop varieties and scientifically validated production practices. This intervention is strategically designed to enhance participants' proficiency in modern agronomic techniques, promote informed decision-making and ensure more efficient utilization of resources, while simultaneously addressing gender-responsive gaps in access to agricultural knowledge and skills. In 2012-13, the Government of Gujarat launched a specialized training initiative titled "Agricultural Skill Development Training Programme for Women Farmers" to promote gender equity and empower women in agriculture. This was subsequently extended in 2013-14 to include male farmers and rural youth, thereby broadening the scope of outreach.

Over the past nine years, the programme has facilitated hands-on learning and exposure to agricultural best practices for numerous beneficiaries. Given the extensive duration and wide coverage, it is imperative to undertake a systematic impact assessment of this training intervention, particularly in terms of its influence on farmers' knowledge levels, attitudes, scientific orientation and overall perception towards modern agricultural practices. Such an evaluation would provide critical insights into the effectiveness of skill development initiatives and guide future policy and programmatic decisions aimed at sustainable agricultural transformation.

Objective

To identify and analyze the constraints perceived by beneficiaries affecting the adoption of agricultural skill development training programme benefits.

Methodology

The investigation was undertaken in the Saurashtra region of Gujarat State during the agricultural year 2021-22, adopting an ex post facto research design to examine the outcomes of agricultural training interventions. The study employed a multistage sampling framework to ensure systematic and context-specific selection of respondents. At the initial stage, four Farmer Training Centres (FTCs) were purposively selected from the seven operational FTCs in the region, based on the criterion of higher farmer participation in training programmes. This selection criterion was applied to capture training environments with substantial exposure and implementation intensity.

In the subsequent stage, two villages were identified from the operational jurisdiction of each selected FTC, using official records and recommendations provided by the respective Farmer Training Centres. From each selected village, a structured sampling approach was followed to identify respondents. Twenty trained farmers who had participated in FTC-organized training programmes were purposively selected from each village, resulting in a total

sample of 160 trained beneficiaries. To facilitate meaningful comparison and control for contextual variability, an equal number of untrained farmers were randomly drawn from the same villages, thereby ensuring parity in agro-ecological and socio-economic conditions between the two respondent groups.

To ascertain the constraints encountered by trained stakeholders in relation to various aspects of the training programme, an open-ended question was administered to elicit their perceived difficulties. The constraints were categorized aspect-wise, and the corresponding frequencies and percentages were calculated for each constraint. To determine the relative importance of the identified constraints, overall ranks were assigned based on the magnitude of the percentage values.

Results and Discussion

Knowledge acquisition extends beyond the mere accumulation of factual information; it is a reflective and integrative process shaped by an individual's prior experiences, belief systems, values and emotional orientations. In this regard, Bloom (1956) ^[2] conceptualized knowledge as observable behavior demonstrated in testing situations that emphasize the recall or recognition of ideas, materials or phenomena. Within agricultural training contexts, the effectiveness of knowledge transfer is therefore contingent not only on content delivery but also on the learner's ability to contextualize and internalize the information provided.

During participation in institutional training programmes, beneficiaries often encounter a range of constraints that may impede the effective assimilation and application of acquired knowledge and skills. Systematic identification of these constraints is essential for enhancing the design, delivery and impact of future training initiatives. Planning constitutes a critical dimension of any training programme, involving the prioritization of activities, formulation of clearly defined objectives, allocation of appropriate resources and facilities for stakeholders, and anticipation of potential challenges faced by trainees along with corresponding remedial strategies. In alignment with this framework, respondents were encouraged to articulate the constraints they experienced with respect to various training-related components.

The perceived constraints were quantified through the computation of frequencies and percentages, and their relative severity was determined by assigning ranks based on the magnitude of responses. The analyzed data were systematically compiled and presented in tabular form. Interpretation of the findings based on percentage distribution and rank order revealed that the most critical constraint perceived by stakeholders was the complexity of introduced technologies, which were considered difficult to comprehend and operationalize, thereby securing the highest rank.

Subsequent major constraints, in descending order of severity, included the perceived mismatch between theoretical content and practical farm realities, absence of pre-training contact with participants, inadequate access to institutional credit facilities, high cost associated with recommended technologies, limited extension efforts to motivate trainees, insufficient emphasis on attitude change

among participants and ineffective utilization of teaching aids during training sessions. These constraints were ranked second through eighth, respectively, indicating their substantial influence on the overall effectiveness of the training programme.

Conversely, constraints perceived as relatively less severe by the stakeholders included inadequate adoption of participatory approaches, lack of systematic follow-up mechanisms, inappropriate duration of training programmes, deficiencies in rapport-building exercises, limited novelty in the training syllabus, inadequate basic arrangements for trainees, insufficient integration of theory with practical demonstrations, non-availability of production inputs and improper assessment of training needs. These factors were

ranked from ninth to seventeenth, reflecting their comparatively lower impact on training outcomes.

Based on the cumulative analysis of ranked constraints, it may be concluded that the most significant impediments to effective training outcomes were the complexity of recommended technologies, poor alignment between theoretical instruction and on-farm applicability, absence of pre-training engagement, inadequate credit support mechanisms and the high cost of technological interventions. Addressing these critical constraints is essential for improving the relevance, adoptability and sustained impact of agricultural skill development training programmes.

Table 1: Constraints faced by trained respondents with respect to training programme ($n = 160$)

Sr. No.	Constraints	Frequency	Percentage	Rank
1	Participatory approach was not followed.	78	48.75	IX
2	Training need was not properly assessed.	35	21.88	XVII
3	Complex technologies were difficult to understand.	139	86.87	I
4	Production inputs were not available.	39	24.38	XVI
5	Theory was not followed with enough demonstrations.	44	27.5	XV
6	High cost of technology.	109	68.13	V
7	Insufficient credit facilities.	114	71.25	IV
8	Not enough attempt to change the attitude of respondents.	93	58.13	VII
9	Deficient in rapport building exercise.	57	35.63	XII
10	Basic arrangements for stakeholders trainees were not made.	48	30.00	XIV
11	No pre-training contacts.	121	75.63	III
12	Theory of training was not applicable in farm reality.	128	80.00	II
13	Duration of training was not appropriate.	63	39.38	XI
14	Teaching aids were not utilized properly.	87	54.38	VIII
15	Nothing new in the training syllabus.	53	33.13	XIII
16	Improper follow up.	69	43.12	X
17	Not enough extension activities to motivate.	98	61.25	VI

These finding was supported by that of reported by Kumar and Dutt (2000), Suguna (2002) ^[5], Tiwari (2002) ^[8], Jeya and Somasundaram (2003) ^[3], Tejaswini *et al.* (2004) ^[6], Abraham (2013) ^[1], Singh (2014) ^[4] and Thakar *et al.* (2019) ^[7].

Conclusion

The analysis revealed that stakeholders encountered a wide spectrum of interrelated constraints that collectively limited the effectiveness of the training programme. The most prominent challenge was the perceived complexity of the recommended technologies, which respondents found difficult to comprehend and operationalize under field conditions. This was closely followed by a disconnect between the theoretical content delivered during training and its practical applicability at the farm level, thereby reducing the usability of the knowledge gained.

Other major constraints included the absence of pre-training interaction with participants, which restricted need-based customization of training modules, and inadequate access to institutional credit facilities, compounded by the high cost of the promoted technologies. These economic and structural barriers significantly constrained the adoption of training outcomes. Furthermore, respondents reported insufficient extension efforts to motivate participation and reinforce learning, along with limited emphasis on attitude transformation, which is critical for fostering behavioural

change.

Pedagogical shortcomings were also evident, as teaching aids were perceived to be inadequately utilized and participatory learning approaches were not effectively incorporated into the training process. Additional constraints included weak follow-up mechanisms after training completion, inappropriate duration of training programmes, and deficiencies in rapport-building exercises between trainers and trainees, all of which adversely affected engagement and knowledge retention.

At the content and logistical levels, respondents indicated that the training syllabus offered limited novelty, basic arrangements for farm women trainees were insufficient, and theoretical instruction was not adequately supported by practical demonstrations. Moreover, the non-availability of essential production inputs further hindered the translation of acquired skills into practice. Finally, the lack of systematic training needs assessment prior to programme implementation emerged as a critical limitation, undermining the relevance and effectiveness of the training interventions.

Acknowledgement

The authors sincerely acknowledge all the respondents who voluntarily participated in this research. Their time, effort and valuable insights were instrumental to the completion of this study.

Conflict of interest

The authors of the paper declare no conflict of interest.

References

1. Abraham V. Missing labour or consistent de-feminisation. *Economic and Political Weekly*. 2013;48(31):99-108.
2. Bloom BS, Engelhardt M, Frust E, Hill W, Krathwal DR. *Taxonomy of educational objectives: The cognitive domain*. New York: Orient Longmans; 1956.
3. Jeya R, Somasundaram. Perceived opinion of trainees farm women in TANWA training. *Journal of Extension Education*. 2003;14(2):3552-3553.
4. Singh K. Reactions of the trainees about dairy entrepreneurship training course organized by Punjab Dairy Development Board at Bija, Ludhiana [MVSc thesis]. Ludhiana (IN): Guru Angad Dev Veterinary and Animal Sciences University; 2014.
5. Suguna B. Strategies for empowerment of rural women. *Social Welfare*. 2002;46(5):3-6.
6. Tejaswini CN, Chandra SV, Gowda NK. Performance of farm women in agriculture and income generation activities. *Manage Extension Research Review*. 2004;(1):68-73.
7. Thakar DS, Barad VG, Shah SH, Patel PV. Impact of training programme on knowledge level of farm women regarding agriculture, animal husbandry, home science and horticulture. *Gujarat Journal of Extension Education*. 2019, 122-126.
8. Tiwari MK. Problems and overall performance of undergraduate agricultural students in relation to their socio-personal characteristics [MSc (Agri) thesis]. Ludhiana (IN): Punjab Agricultural University; 2002.