

Evidence of improved Faculty pedagogical competencies through targeted training in resource constrained agricultural higher education in North East India

L. K. Mishra

lkmishra2005@gmail.com

Central Agricultural University

M Norjit Singh

Central Agricultural University

Pukhram Bhumita

Central Agricultural University

N Brajendra Singh

Central Agricultural University

P. T. Sharma

Central Agricultural University

Indira Sarangthem

Central Agricultural University

Research Article

Keywords:

Posted Date: August 14th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10477253/v1>

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Additional Declarations: No competing interests reported.

Abstract

Purpose

Faculty quality is the most critical determinant of education system effectiveness. This study evaluates the effectiveness of a Faculty Induction Program (FIP) in equipping newly appointed faculty with essential pedagogical skills, institutional knowledge, and professional competencies required for multifaceted academic roles.

Design:

A descriptive survey design was employed to assess experiences and perceptions of new faculty participants following a structured 21-day Faculty Induction Program.

Methodology:

A semi-structured questionnaire was administered to 125 newly appointed Assistant Professors at a higher agricultural education institution to gather quantitative and qualitative feedback on program outcomes.

Findings:

The FIP was perceived as exceptionally well-organized and highly beneficial. Sessions on technology-based teaching strategies and research grant proposal development were identified as particularly valuable. Participants unanimously felt inspired to pursue further professional skill development, and 90% affirmed intentions to apply acquired skills in their future careers.

Practical Implications:

Structured induction programs are essential for faculty readiness. University administrators should make such programs mandatory, using evidence-based curriculum design to address pressing professional development needs in academic institutions.

Theoretical Implications:

This study demonstrates how structured induction, grounded in organizational socialization theory and adult learning principles, effectively bridges the theory-practice gap in faculty preparation—a challenge recognized globally in higher education.

Originality/Value:

This research provides empirical evaluation of a faculty induction program within higher agricultural education, an understudied domain. Findings offer a replicable model for agricultural and specialized universities worldwide seeking to enhance faculty readiness and institutional quality.

Introduction

The quality of any education system rests fundamentally on the competence of its teachers, and this holds especially true in higher agricultural education, where faculty must combine disciplinary expertise with the practical, extension-oriented skills that agricultural development demands. Across higher education systems worldwide, newly recruited faculty typically enter the profession as experts in their disciplines but as novices in teaching, and induction into the profession is widely recognised as a distinct and demanding developmental stage of an academic career (Feiman-Nemser, 2001). International reviews of induction and mentoring programmes for beginning teachers report consistent, though not unanimous, evidence that structured induction improves retention, classroom practice and, in some contexts, student outcomes (Ingersoll & Strong, 2011). Beyond its instructional function, induction is also a process of organisational socialisation, through which new members acquire the attitudes, knowledge and behaviours required to participate effectively within a specific institution (Van Maanen & Schein, 1979).

Despite this substantial international evidence base, empirical research on faculty induction remains heavily concentrated in general higher education and school-level teaching in high-income countries, with comparatively little documented evidence from higher agricultural education institutions (HAEIs), particularly in the Global South (Acker, 1999). This is a significant gap: agricultural faculty carry a broader and more heterogeneous mandate than most disciplines, spanning classroom teaching, hands-on field-based instruction, research supervision and extension work, and the induction needs generated by this mandate are not well captured by evidence drawn from conventional classroom-teaching contexts (Honeyman & Eck, 2025). The present study addresses this gap by examining a structured Faculty Induction Programme (FIP) implemented at

Central Agricultural University (CAU), Imphal, India, using it as a case through which to extend the international evidence on induction to the distinctive setting of higher agricultural education, rather than as an account of a purely Indian phenomenon.

In India specifically, faculty in higher education, including HAEIs, typically join the profession after completing a doctorate and the National Eligibility Test (NET), conducted by bodies such as the University Grants Commission (UGC), the Council of Scientific and Industrial Research (CSIR), and the ICAR Agricultural Scientist Recruitment Board (ICAR-ASRB); this route to appointment confers strong disciplinary credentials but does not include formal training in teaching, learning or assessment (Ramesh & Reddy, 2015). Human Resource Development Centres attached to general universities offer orientation and refresher programmes for faculty (Mishra et al., 2022), but equivalent structured induction for the roughly 20,000 faculty members serving India's National Agricultural Research System - comprising 3 Central Agricultural Universities, 64 State Agricultural Universities, and several Deemed and Central Universities with agricultural faculties (Rana et al., 2020; ICAR, 2019; IAUA, 2019) - remains limited to short, largely technical schools run by the ICAR National Academy of Agricultural Research Management (ICAR-NAARM), whose reach cannot extend to the full system (Venkattakumar & Sontakki, 2013). A recent national survey found that 28.8% of agricultural faculty showed average-to-low teaching aptitude (Ramesh & Reddy, 2015), and follow-up work identified specific competency gaps in student engagement, mentoring, ICT-based teaching and course management that a well-designed induction programme could address (Ramesh et al., 2017; Ramesh et al., 2019).

Beyond pedagogy, the rapid diffusion of AI, ICT and blended-learning tools has widened the range of skills new faculty must acquire, while many also remain unfamiliar with institutional governance, administrative structures and student-counselling responsibilities that fall outside the classroom (Stamou et al., 2024; Elugbaju et al., 2024). Well-designed induction is understood, both theoretically and empirically, to address this dual gap. Evidence on retention is mixed but broadly favourable: Ronfeldt and McQueen (2017) and Bastian and Marks (2017) report that mentoring-based induction improves retention among beginning teachers, and Kraft et al. (2018) find a positive effect on instructional quality, whereas Glazerman et al. (2010), studying US elementary education, found no significant effect - a result that, given the different institutional and disciplinary context, does not transfer directly to Indian HAEIs. More broadly, induction functions as a strategic human-resource investment that builds institutional attachment and equips faculty with knowledge of governance, ethics and university systems (King et al., 2018; Admiraal et al., 2023; Hénard & Roseveare, 2012). The UGC (2021) has formally recognised this need at the national level, envisioning induction as a structured remedy for the informal, ad hoc skill-building that currently characterises entry into Indian academic careers (Mishra et al., 2022).

Theoretical Framework

This study situates faculty induction within four complementary theoretical strands. First, Knowles' (1980) theory of andragogy frames newly recruited faculty as adult learners who bring prior professional and disciplinary experience, and who therefore require problem-centred, self-directed and immediately applicable learning experiences rather than a purely didactic curriculum - a principle reflected in the FIP's emphasis on hands-on sessions and grant-proposal writing. Second, Feiman-Nemser's (2001) conceptual framework for the teacher-learning continuum conceives of induction as a distinct developmental stage, bridging pre-service preparation and independent practice, with developmental tasks of its own - learning the curriculum, the institution and the student population - that differ from both initial training and later in-service development; this framework is used here to interpret why participants valued applied, role-specific modules over generic instruction. Third, Van Maanen and Schein's (1979) theory of organisational socialisation frames induction as the process through which newcomers acquire the institutional knowledge, values and behaviours needed to function within a specific organisation, which is relevant to the FIP's emphasis on financial and administrative literacy, accreditation systems, and institutional governance that extend beyond classroom pedagogy. Fourth, Lave and Wenger's (1991) situated-learning perspective, and its concept of legitimate peripheral participation within a community of practice, is used to interpret the role of peer interaction and cohort-based learning in the programme, and to frame this study's finding on unmet interaction needs (see Results and Discussion) as a shortfall in community-of-practice formation rather than a purely logistical shortcoming. Finally, Desimone's (2009) framework for evaluating teacher professional development - which identifies content focus, active learning, coherence, duration and collective participation as core features associated with effective professional learning - provided the analytic lens used to interpret participant feedback in this study. Taken together, these frameworks position the FIP not merely as an administrative onboarding exercise but as an intervention that can be evaluated against, and can in turn inform, established theory on adult learning, teacher induction, organisational socialisation, and professional development, thereby extending this body of theory to the underexamined context of higher agricultural education.

Wong (2004) defines an induction programme as a supportive introductory stage designed to help new employees settle quickly into their roles and become active, efficient contributors; this definition, combined with the four theoretical strands set out above, frames the evaluation reported in this paper.

In view of the limited induction provision available specifically to newly recruited HAEI faculty, Central Agricultural University (CAU), Imphal, Manipur, initiated a dedicated Faculty Induction Programme in 2024–2025. CAU, Imphal is the largest Central University serving teaching, research and extension across India's seven North Eastern Hill Region (NEHR) states – a biodiversity-rich, agro-climatically diverse region bordering China, Myanmar, Bhutan, Nepal and Bangladesh – through 13 constituent colleges, 6 Krishi Vigyan Kendras, and 10 undergraduate, 48 postgraduate and 35 doctoral programmes accredited by the National Agricultural Education Accreditation Board (NAEAB). The university's 398 faculty members work across the agricultural and allied sciences. Recognising this need, the university's Directorate of Instruction, in coordination with its Priority Setting and Monitoring (PME) Cell, conducted the FIP in five phases. To evaluate the programme's effectiveness against the theoretical framework outlined

above, an evaluation mechanism was designed to explore participants' perceptions, assess infrastructural and instructional quality, and identify challenges faced by participants and administrators. The specific objectives of this evaluation were:

1. To explore the perceptions of newly recruited assistant professors on faculty induction programs.
2. To analyze the problems faced by the participants and the Course Coordinator of the FIP in running FIP and the effect of FIP among newly appointed teachers.
3. To summarize the "Vision Document" prepared by newly recruited faculties for their institution after completion of FIP.

Materials and methods

Description of the Training Program

The aim of the programme was to encourage newly recruited faculties in different constituent colleges of Central Agricultural University, Imphal, Manipur, India to use learner-centered approaches, ICT-integrated learning, and innovative teaching and evaluation technologies in higher education (Blended Learning platforms, Animation based learning models etc). The induction programme covered teaching and research methods (e.g., flip classrooms, collaborative learning, case studies), curriculum design, awareness about financial and administrative awareness, university ranking and accreditation systems in India, research and publication ethics, research proposal writing, awareness about different funding agencies, professional ethics, sharing best practices, and staying up-to-date on developments in their field of study. The 21 days Faculty Induction Programme consisted of following modules of one week duration each with different topics relevant to the module:

Module 1: Foundation Course on Teaching Methodologies

Module 2: Developing Successful Research Grant Proposals

Module 3: Innovative Technologies in Teaching, Research and Extension

The target group of the programme was novice faculty members (assistant professors newly recruited or with less than 5 years' teaching experience). Participation was voluntary. The group was heterogeneous with regard to subject disciplines which included ten major disciplines related to agriculture and allied sciences (Fig. 1). A maximum of 40 participants constituted the batch size in order to increase active involvement.

The date for the study was sourced from 125 participants who were randomly selected from the total 179 participants who attended the faculty induction program conducted between 2024 and 2025. The feedback of the participants was received through mixed-mode method adapted from previously reported study (Mishra et al., 2022). For this a semi structured questionnaire was prepared as suggested earlier by Rust et. al., (1998) for original evaluation of the programme and related information concerned with overall experience of the participants. This questionnaire was used for collecting data from the participants. The participant teachers who were novice faculty members (assistant professors newly recruited or with less than 5 years' teaching experience) were of Indian nationality coming from 20 states having diverse traditions; have different cultural values, religion, language, food habits, and lifestyle.

The infrastructural and instructional facilities of the venue for the FIP were located at the College of Agriculture, Central Agricultural University, Imphal, Manipur, India. It included a well-equipped Conference Hall having a capacity for seating 45 participants. It had all the modern ICT facilities for offline and online sessions with high speed internet facility. All the phases of FIP were strictly residential and all the participants were lodged in the College Guest House on room sharing basis. For sessions requiring field exposure, the facilities at the Central Farm of the University were utilized. All the participants were advised well in advance to bring their laptops as per the requirement of sessions. The language of instruction was English and the sessions were delivered in form of lectures, hands on sessions, group discussions and assessment sessions. Each day of the programme had one lecture and one hands on/assessment session in pre and post lunch schedule. Dedicated whatsapp group was created for efficient sharing of information and maintain easy communication among the participants and the organizers. A focus group discussion (FGD) was also conducted for the collection of additional data. The lectures of the FIP modules was given by eminent resource persons invited from universities, Indian Institute of Technology (IITs), Indian Institute of Management (IIMs), National Institute of Technology (NIT), entrepreneurs, and renowned persons from private organizations of repute. The feedback based on the semi-structured questionnaire was obtained from the participants at the end of the program, to study the effect of FIP among newly appointed teachers.

Results and Discussion

The faculty induction program for novice faculty members (assistant professors newly recruited or with less than 5 years' teaching experience) was conducted at the College of Agriculture, Central Agricultural University, Imphal, Manipur, India. The Directorate of Instruction in coordination with the PME cell of Central Agricultural University, Imphal, Manipur, India conducted five phases of Faculty Induction Programme during the academic year 2024–2025. A total of 179 novice faculty members (assistant professors newly recruited or with less than 5 years' teaching experience) have been trained under the FIP programme of the Central Agricultural University, Imphal. 87 experts from different institutions, belonging to Indian Institute of Management, Indian Institute of Technology, Central Universities, National Institute of Technology, Indian Council of Agricultural Research,

International Organizations, Government Funding Agencies, Financial Institutions, Private institutions shared their knowledge, experience and comprehensive insights with the participants. The details of the institutions from which resource persons were sourced is given in Table 1.

The pedagogy adopted for delivering the sessions in the FIP included Expert-led discussions Group discussion based on videos/films/case studies/reading material, Hands on session on application of ICT tools in creating curriculum based materials for blended classrooms. In some sessions Pre-reading material for self-study was given to participants and further presentation was done by them in group or individually if required. Think-pair and share activities, creative thinking exercise, group interactions in field were also adopted. The participants were assessed based on presentations, peer assessment, writing lesson plans, demo classes, designing a test, discussion based on case studies and semi-structured evaluation forms. The details of the participant's original completed evaluation form, which they filled in at the end of the each FIP, were used to compare their evaluation of the programme. The diverse aspects of the FIP were rated from 1.0 to 5.0 by the participants where 1 is minimum and 5 is maximum possible score respectively. The questions on this questionnaire, are shown in Table 2.

Table 1
List of institutions from which resource persons were sourced

Type of Institution							
Indian Institute of Management (IIM)	Indian Institute of Technology (IIT)	National Institute of Technology (NIT)	Central Universities	Government Funding Agencies/Organizations	International Organizations	ICAR Institutes/Divisions	Private Organizations
1. IIM Kolkata	1. IIT Guwahati	1. NIT Warangal	1. Manipur University, Imphal	1. Department of Biotechnology, (DBT)	1. GIZ, Germany	1. National Agricultural Science Foundation	1. Skyllygym, Hyderabad
2. IIM Shillong	2. IIT Kharagpur	2. NIT Silchar	2. North Eastern Hill University, Shillong	2. Department of Science and Technology, (DST)	2. IFAD, New Delhi	2. ICAR-IASRI	2. Uniconverge Technologies, New Delhi
			3. Central Agricultural University, Imphal	3. Council for Scientific and Industrial Research (CSIR)	3. ICRISAT, Hyderabad	3. ICAR-NAARM	3. Amantya Technologies, Bengaluru
			4. Mizoram University, Aizawl	4. North Eastern Space Application Center (NESAC), Shillong			4. Microvioma Pvt. Ltd, Bengaluru
				5. MANAGE, Hyderabad			5. Lamzing Technologies Pvt. Ltd, Imphal, Manipur
				6. North Eastern Council, Shillong			6. North East Council
				7. NABARD, Imphal			7. Medi-Caps University
				8. Institute of Bioresources and Sustainable Development, Imphal			8. Centurian University of Technology & Management, Odisha
				9. National Fisheries Development Board			9. Navgurukul, New Delhi
				10. National Medicinal Plant Board.			10. WASSAN, Hyderabad
				11. National Mission for Himalayan Studies			
				12. Ministry of Electronics and Information Technology (MeitY), New Delhi			

Table 2

Questionnaire Used for Evaluation of Faculty Induction Programme (Responses of participant to the questions in percentage, n = 125)

	Outstanding (5.0)	Very Good (4.0)	Good (3.0)	Average (2.0)	Poor (1.0)
A. Feedback based on Overall Course Quality of the Faculty Induction Programme					
Please rate the Faculty Induction Programme based on Course Content of the Training Program	22.58	45.16	22.58	9.68	0.00
Please rate the FIP based on Relevance to your needs as Assistant Professor in a HAEI	32.26	48.39	19.35	0.00	0.00
Please rate the FIP based on Coordinator's Skill and Facilitation	19.35	58.06	19.35	3.23	0.00
Please rate the FIP based on Overall Learning from the Course	6.45	64.52	25.81	3.23	0.00
Please rate the FIP based on Choice of Experts for the Induction Programme	19.35	48.39	29.03	3.23	0.00
Rate the FIP based on fulfilled Expectations from the Programme	16.13	51.61	32.26	0.00	0.00
Rate the Induction Programme on encouraging participants in Development of Teaching Skills	35.48	38.71	22.58	3.23	0.00
Did the Programme helped you to gain extra knowledge	25.81	51.61	19.35	3.23	0.00
Training material provided in the FIP was adequate, helpful and easily accessible	29.03	51.61	16.13	3.23	0.00
Do you agree that Experts were well prepared for their presentations/sessions	35.48	38.71	19.35	6.45	0.00
Do you agree that Trainees got sufficient opportunities to interact with each other	12.90	45.16	32.26	9.68	0.00
Do you agree that Sufficient assignments and hands on sessions were given during the FIP	51.61	35.48	9.68	3.23	0.00
Please rate the FIP based on Time allotted for each session	16.13	51.61	29.03	3.23	0.00
Please rate the FIP based on Range and details covered in each topic	25.81	48.39	25.81	0.00	0.00
Please rate the FIP based on Usefulness of sessions	22.58	41.94	29.03	6.45	0.00
Please rate the FIP based on Teaching aids used	54.84	45.16	0.00	0.00	0.00
B. Feedback based on Infrastructure facility and support during Faculty Induction Programme					
Please rate the FIP based on Hospitality extended during the FIP	70.97	19.35	9.68	0.00	0.00
Please rate the FIP based on Quality of Food Provided during the FIP	29.03	32.26	29.03	6.45	3.23
Please rate the FIP based on Lodging Facilities	54.84	38.71	6.45	0.00	0.00
Please rate the FIP based on Classroom Environment	64.52	29.03	3.23	3.23	0.00
Please rate the FIP based on Co- Course Coordinator's support and accessibility	32.26	67.74	0.00	0.00	0.00
Suggestions for Future Faculty Induction Programme					
	Strongly Agree	Moderately Agree	Do Not Agree		
21 Days Duration is ideal for Faculty Training Program is Ideal	80.65	12.90	6.45		
More Practical Exercises must be included	54.84	29.03	16.13		
Time Duration for each day of the training must be reduced	19.35	16.12	64.51		
I will use the skills acquired and information learned during the Programme in my future career	70.96	19.35	0.00		
Do you feel inspired by the modules of FIP to explore more about your professional skills	83.87	16.12	0.00		

Any Faculty Induction Programme is a critical training initiative designed to orient and equip new faculty, specifically Assistant Professors in Higher Academic and Educational Institutions (HAEI), with essential pedagogical skills, institutional knowledge, and professional competencies. The program's success is directly linked to its ability to prepare faculty for the unique challenges and opportunities of their roles. The analysis of the data presented in Table 2 originates from a questionnaire distributed to a cohort of 125 program participants selected from a total population of 179

participants who attended the Faculty Induction Programme conducted at College of Agriculture, Central Agricultural University, Imphal, Manipur, India. It provides a direct measure of their satisfaction and perceived learning outcomes.

A comprehensive and nuanced analysis of participant feedback on the Faculty Induction Programme extends beyond a simple recitation of quantitative data to interpret the significance of the responses, identify causal relationships, and derive actionable insights. This evaluation is designed to inform strategic decision-making for future program development and to serve as a foundational document for assessing the efficacy of professional development initiatives in a higher education context. The evaluation, based on a structured questionnaire, reveals that the program was overwhelmingly successful in its core mission of professional development and skill enhancement. The findings highlight a number of significant strengths, particularly in the areas of course content, the effectiveness of the facilitators and subject-matter experts, and the provision of high-quality logistical support, including lodging and classroom facilities. These elements collectively contributed to a highly positive and impactful experience for the participants.

Despite its broad success, the evaluation identifies two primary areas for strategic improvement. The data indicates a clear opportunity to enhance peer-to-peer interaction and community building among participants, as this metric received comparatively lower satisfaction ratings with only 12.9 and 45.16 per cent of the participants rating it excellent and very good respectively. Additionally, the quality of food services was noted as a point of inconsistency when compared to the otherwise outstanding infrastructure and hospitality. One reason for the inconsistency in the quality of food services may be the fact that participants came from 20 different states of India and had a widely diverse food habit and taste preferences. Due to this participants may have rated the food services according to their personal preferences. However, it provides an important insight for future such programmes where organizers need to introduce diversity in the type of food served during the programme. A review of the catering services is also advised to ensure consistency with the high standards in future. The program's fundamental structure, including its duration and intensive daily schedule, should be maintained, as these features were strongly endorsed by the participants and are perceived as integral to the program's value and efficacy. Based on the analysis of the feedback received, it is recommended that future iterations of the FIP focus on integrating more structured group activities and collaborative projects to foster professional networking.

The data presented in Table 2 can be systematically categorized in three prominent categories: Overall Course Quality, Infrastructure and Support, and Suggestions for Future Programmes. The interpretation of the data involves a detailed examination of participant ratings and agreement percentages, followed by an in-depth discussion of the implications of these findings.

The foundational elements of the FIP—its course content and its relevance to the participants' roles—received exceptionally high marks. A combined 67.74% of participants rated the course content as "Outstanding" or "Very Good". Even more remarkably, the program's relevance to the needs of an Assistant Professor in a HAEI was rated as "Outstanding" or "Very Good" by a combined 80.65% of participants. The percentage of "Outstanding" ratings for relevance (32.26%) was also notably higher than for course content (22.58%).

This distribution of responses suggests a powerful relationship between the perceived quality of the content and its practical utility. Participants did not merely find the content to be of high academic quality; they directly perceived its value through its immediate and direct applicability to their professional duties. This indicates that the program's curriculum successfully addressed a critical need for early-career faculty, translating theoretical knowledge into practical, career-relevant skills. The strong consensus on relevance is a testament to the program's precise and effective curricular design.

Faculty and Facilitator Effectiveness measured in terms of the quality of the FIP's instructional staff was identified as a major driver of the program's success. The Coordinator's Skill and Facilitation were rated as "Outstanding" or "Very Good" by a robust 77.41% of participants. Similarly, the Choice of Experts for the program received "Outstanding" or "Very Good" ratings from 67.74% of participants. Furthermore, a strong majority of participants, 74.19%, agreed that the experts were well prepared for their sessions, with 35.48% strongly agreeing. The high ratings for both the coordinator and the experts are not isolated data points but form the cornerstone of the positive participant experience. A direct link can be drawn between the rigorous selection and preparation of the instructional staff and the program's perceived value. The fact that participants perceived the experts as well-prepared and the coordinator as highly skilled suggests that the investment in quality personnel is a primary factor influencing the overall learning and satisfaction. The high ratings for both these metrics demonstrate that the program's leadership successfully identified and secured a team of instructors capable of delivering the curriculum effectively and engagingly.

FIP was highly successful in its fundamental objective of fostering professional growth in the aspects of Learning, Skill Development, and Engagement. The "Overall Learning from the Course" was rated as "Outstanding" or "Very Good" by a combined 70.97% of participants. This is further substantiated by the specific feedback on skill development, with 74.19% of participants rating the program "Outstanding" or "Very Good" on its ability to encourage the development of teaching skills. The participants also felt they gained significant additional knowledge, with 77.42% rating this aspect as "Outstanding" or "Very Good". These findings indicate that the FIP successfully went beyond simple information transfer to effect a tangible change in the participants' professional capabilities. The program's design, which emphasizes practical application, appears to have directly contributed to this demonstrable sense of skill acquisition. The feedback on "gaining extra knowledge" and "developing teaching skills" validates the program's pedagogical approach as effective and empowering, proving its direct impact on professional competence.

Pedagogical and Logistical Support which are important supporting elements of the FIP, including training materials and instructional aids, were rated very highly. A remarkable 80.64% of participants rated the training materials as "Outstanding" or "Very Good". The "Use of Teaching aids"

received a perfect satisfaction score, with 100% of participants rating it as either "Outstanding" (54.84%) or "Very Good" (45.16%). This near-unanimous endorsement underscores the program's commitment to providing a technologically and logistically well-supported learning environment. However, a critical distinction emerges when analyzing the ratings for hands-on sessions versus participant interaction. The program's practical, hands-on methodology was overwhelmingly praised, with 87.09% of participants rating the "Sufficient assignments and hands on sessions" as "Outstanding" or "Very Good". In stark contrast, the rating for "Trainees got sufficient opportunities to interact with each other" was comparatively lower, with only 58.06% rating it "Outstanding" or "Very Good". A substantial 32.26% of participants rated this aspect as "Good," and 9.68% as "Average".

This finding presents a meticulous picture of the FIP in this aspect. The high endorsement of hands-on activities, coupled with the relatively lower rating for peer interaction, suggests that while the program successfully engaged participants in active learning, these activities may have been designed for individual, rather than collaborative, application. For example, a session on a new software tool could be considered "hands-on" but may not necessitate group work. This indicates a missed opportunity to leverage the cohort setting to foster a stronger professional network. The program excels in individual skill acquisition but has room to grow in creating an environment that explicitly promotes peer-to-peer knowledge exchange and community building. Read through Lave and Wenger's (1991) situated-learning lens, this gap represents an under-developed opportunity for legitimate peripheral participation within a community of practice: hands-on tasks alone do not automatically generate the social interaction through which novice faculty construct a shared professional identity. In Desimone's (2009) terms, the FIP scores highly on content focus and active learning but has room to strengthen the collective-participation feature that is associated with more durable professional-development effects.

The physical and logistical environment of the FIP was a significant contributor to the overall positive experience. The feedback in this category was generally outstanding, with one notable exception. The FIP's efforts to create a welcoming and comfortable environment were highly successful. The "Hospitality extended during the FIP" was rated as "Outstanding" or "Very Good" by a large majority of participants (90.32%). The "Lodging Facilities" received even higher praise, with a combined 93.55% of participants rating them as "Outstanding" or "Very Good". These ratings are particularly significant as they extend beyond the academic mission to the holistic participant experience. The provision of high-quality lodging and hospitality signals that the organizing institution values its faculty and is invested in their well-being. This creates a psychological foundation of trust and respect, which in turn likely contributes to a more receptive and engaged learning mindset. The comfort provided allows participants to focus fully on the program's content without logistical distractions.

The "Classroom Environment" was rated as "Outstanding" or "Very Good" by an impressive 93.55% of participants, mirroring the high standards of other physical infrastructure. This indicates that the learning spaces were conducive to focus and engagement. However, the quality of food provided stands out as a clear point of relative variance. While 29.03% of participants rated it as "Outstanding" and 32.26% as "Very Good," a significant portion rated it as "Good" (29.03%), "Average" (6.45%), or "Poor" (3.23%). This is the only metric in this section with a notable distribution across all five rating categories. The stark contrast in ratings between food quality and all other infrastructure metrics (hospitality, lodging, classroom environment) is a notable finding. Addressing this logistical anomaly would bring food quality in line with the universally outstanding ratings of other program elements in future programmes.

Feedback received on the aspects of Participant is a forward-looking attempt, which serves as a guide for strategic enhancements to future FIPs. Participants expressed a strong and consistent consensus on the program's ideal length and daily intensity. An overwhelming 80.65% of participants strongly agreed that the "21 Days Duration is ideal for Faculty Training Program". In a related finding, a majority of 64.51% of participants did not agree with the statement that the "Time Duration for each day of the training must be reduced," while only 19.35% strongly agreed with a reduction. This finding is highly significant. It demonstrates that the participants are not fatigued by the long duration of the program. Instead, they perceive the FIP's value as being directly linked to its rigor and depth. The rejection of a reduced daily time commitment reinforces the idea that participants are highly motivated and desire an intensive, immersive learning experience. The length and intensity of the FIP are not seen as burdens but rather as critical components that allow for a deeper dive into the subjects, justifying the significant time investment in the eyes of the faculty. This finding is consistent with Desimone's (2009) identification of sustained duration as a core feature of effective professional development, and suggests that shortening the FIP to reduce cost or logistical burden would likely come at the expense of its perceived value.

The suggestions for future programs further validate the efficacy of the FIP's pedagogical approach. A strong majority of participants, 83.87%, agreed that "More Practical Exercises must be included," with 54.84% strongly agreeing. This echoes the earlier finding regarding the popularity of hands-on sessions. The most compelling data, however, relates to the program's long-term impact. An impressive 90.31% of participants agreed that they would "use the skills acquired and information learned" in their future careers. Moreover, a near-unanimous 100% of participants either strongly agreed (83.87%) or moderately agreed (16.12%) that they felt "inspired by the modules of FIP to explore more about your professional skills".

This data confirms that the FIP is not merely a training course but a catalyst for professional transformation. The unanimous agreement on feeling inspired indicates that the program successfully fostered a genuine excitement for and a renewed commitment to the participants' roles. The strong desire for "more practical exercises" is directly tied to this feeling of inspiration; participants want more opportunities to apply their knowledge because they see the immediate and long-term value in doing so. This is the ultimate validation of the program's mission and effectiveness.

Taken together, these findings extend and qualify the wider international literature on faculty and teacher induction. The strong ratings for content relevance and facilitator quality corroborate meta-analytic evidence that mentoring- and expertise-rich induction improves perceived competence and instructional confidence (Ingersoll & Strong, 2011; Kraft et al., 2018), while the consistent endorsement of an intensive, multi-week format rather than a short orientation aligns with Feiman-Nemser's (2001) argument that induction constitutes a distinct developmental stage requiring sustained engagement, not a brief administrative welcome. At the same time, the comparatively lower ratings for peer interaction depart from the assumption, implicit in much of the induction literature, that cohort-based delivery automatically confers community and networking benefits (Van Maanen & Schein, 1979); the CAU findings suggest that such benefits must be deliberately designed into the curriculum rather than assumed to follow from co-location alone. In this respect, the present findings both support and refine existing theory, and offer an empirical contribution from a higher agricultural education setting that has been largely absent from the international induction literature (Acker, 1999).

The analysis of participant feedback reveals a consistently positive evaluation of the FIP. The program is demonstrably effective in its core mission of professional development, anchored by the high-quality relevance of its content, the excellence of its instructional staff, and the provision of a superior physical and logistical environment. The program's design, particularly its emphasis on hands-on application, resonates deeply with participants. The data shows that the FIP successfully delivered a high-value experience that equipped new faculty with essential skills and fostered a sense of professional purpose.

Summary of the “Vision Document” prepared by participants for their institution

A unique feature of the Faculty Induction Programme was encouraging the participants to submit their “Vision” regarding their institution for the next decade. All the participants were asked to submit their views after the completion of the FIP. Vision documents submitted by 30 participants were randomly selected for preparing a summary of the documents submitted. The individual visions submitted by participants who are faculty members of Central Agricultural University, Imphal, Manipur, India, while diverse in their disciplinary focus, reveal a profound and cohesive institutional ambition. The collective blueprint for the next decade is founded on a few fundamental, interconnected pillars.

The first is the collective drive for institutional excellence, as measured by national and international rankings. This is the common thread that binds every proposal, from improving curriculum to securing external research grants. It provides a unifying, high-level objective for every department and individual.

The second is a deep and consistent commitment to solving the specific, hyper-local challenges of the NEH region. Instead of mimicking a generalist model, the vision is to turn regional specificities—such as unique biodiversity, climate variability, and traditional farming practices—into a competitive advantage. By becoming the world's authority on topics like indigenous super foods or climate-smart farming systems for the Eastern Himalayan region, CAU can achieve national and global recognition.

Finally, the vision proposes the creation of a sophisticated innovation ecosystem. This ecosystem is designed to create a synergistic cycle between research, entrepreneurship, and collaboration. Research is not conducted in isolation but is explicitly linked to commercial viability through valorization of waste and development of high-value products. These projects are, in turn, supported by a dense network of collaborations with government, industry, and academia. The ultimate goal is to create a self-sustaining system where academic excellence directly fuels regional economic development, transforming the university into a true engine for societal progress.

To operationalize this ambitious collective vision, a strategic, phased approach is recommended for the university's leadership. It is recommended to implement the vision through a multi-year plan, beginning with foundational elements.

1. **Phase I (Years 1–3):** Focus on building the core infrastructure. This includes establishing a centralized data management cell to improve efficiency and data quality for rankings. Simultaneously, invest in training faculty and students in modern technologies like GIS, AI, and digital platforms to build essential human capital.
2. **Phase II (Years 4–7):** With the foundational elements in place, proceed with phased investment in the proposed research centers, such as the agro-ecotourism center and centers for precision agriculture. Focus on securing external funding for these projects through proactive grant applications to agencies like NABARD, DST-SERB, CSIR, and DBT.
3. **Phase III (Years 8–10):** Expand the “Lab-to-Market” pipeline by establishing community-based processing units and launching commercial ventures based on patented technologies and high-value product development. Strengthen international collaborations and global outreach programs to cement the university's reputation as a world leader in its specialized niches.

Conclusions

The FIP's success is a testament to its immersive, hands-on, and rigorous design. The participant feedback reveals that the new faculties are highly motivated and willing to invest significant time and energy into their professional growth. The strong endorsement of the 21-day duration and the rejection of a shorter daily schedule underscore the idea that the perceived value of the program is directly linked to its intensity and depth. The program's greatest untapped potential lies in leveraging this motivation to create a more collaborative and interactive community of learners. By

integrating more structured group work, the FIP could not only continue to excel in individual skill acquisition but also foster a strong, lasting professional network that complements the formal instruction and provides long-term value to its participants.

The vision documents submitted by the participants reveal an ambitious and pragmatic blueprint for the Central Agricultural University, Imphal, Manipur, India. The faculty's collective vision transcends disciplinary boundaries, articulating a cohesive strategy for institutional growth, regional impact, and global recognition. By focusing on academic excellence, climate-resilient research, community empowerment, and strategic alliances, CAU, Imphal can transform itself from a regional university into a leader in agricultural innovation. The explicit focus on solving hyper-local challenges, fostering a circular economy, and leveraging human capital as its core infrastructure provides a clear path to achieving its goals

Recommendations for Future Programmes

Based on the detailed analysis of the participant feedback, the following actionable recommendations are proposed for future iterations of the Faculty Induction Programme:

1. **Curricular and Pedagogical Recommendations:** The FIP should maintain its core curriculum and the high quality of its instructional staff, which were the primary drivers of success. To address the identified gap in participant interaction, it is recommended to:
2. **Integrate Structured Group Projects:** Incorporate more mandatory, multi-day collaborative projects where participants must work together to solve a complex problem or develop a new course module.
3. **Implement Interactive Workshops:** Design sessions that require continuous peer interaction and collaborative problem-solving, rather than individual application.
4. **Logistical and Operational Recommendations:** While the logistical support was overwhelmingly excellent, a formal review of the catering services is advised. This should include an assessment of vendor performance to ensure that food quality aligns with the outstanding ratings of the lodging, hospitality, and classroom environment.
5. **Strategic Recommendations:** The current FIP model should be leveraged as a benchmark for professional development initiatives within the higher agricultural education institutions specifically and other higher education institutions across India. To further measure the program's long-term impact, it is recommended to implement a follow-up mechanism, such as a six-month or one-year survey, to measure the application of acquired skills in the participants' careers and to gauge the continuity and strength of the professional networks established during the program.

Declarations

Disclosure statement

Authors declare No potential conflict of interest.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Clinical Trial Number

"Not Applicable for this Case Study"

Ethics Statement

The Institutional Ethics Committee of the College of Agriculture, Iroisemba, Central Agricultural University, Imphal approved to conduct the study as the participants of the training program were mandated to fill the training feedback forms provided by the organizing committee of the Faculty Development Programme. The protocol adopted in this study was approved by Institutional Ethics Committee of the College of Agriculture, Iroisemba, Central Agricultural University, Imphal in accordance with the Declaration of Helsinki and Good Research Practices Guidelines.

Ethics Approval and Consent to Participate

An informed consent was taken from the participants to use their feedback about the Faculty Development Programme for research and further improvement of the Faculty Development Programme by the authors. This study was approved by the Institutional Ethics Committee of College of Agriculture, CAU, Imphal, Manipur India. The study was conducted in accordance with the Declaration of Helsinki.

Consent to Publish declarations

An informed consent was taken from the participants to analyse, interpret and publish their feedbacks. None of the participant involved in the Faculty Development Programme was below 18 years of age.

Data Availability Statement

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Figures

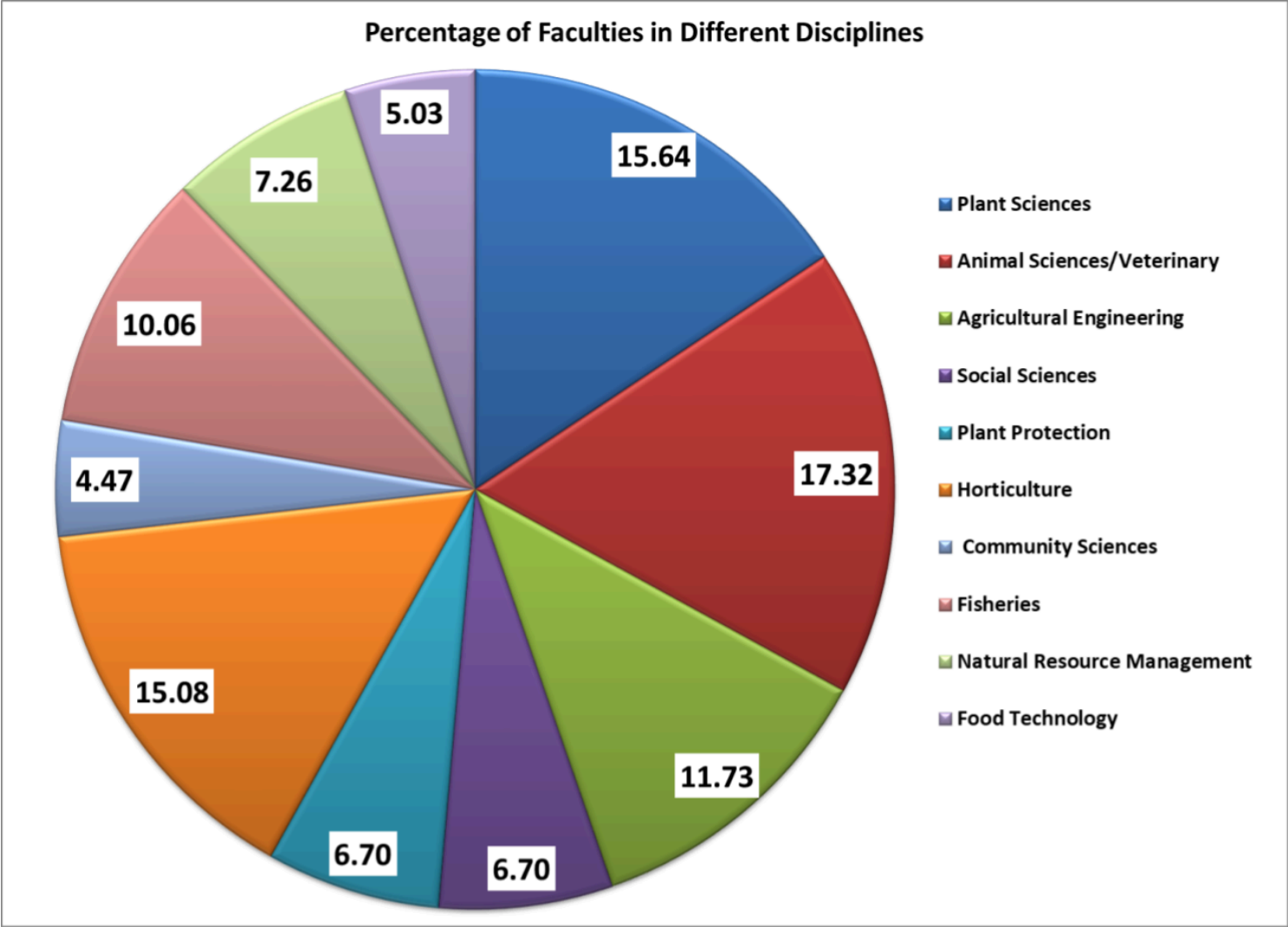


Figure 1

Percentage of Faculties (for n =179) in Disciplines of Agriculture and Allied Sciences