MY MEETING NOTES

**ICAR Sponsored Winter School
On
Advances in Social Science Research and Evaluation
25 January to 14 February 2022**

B. Swaminathan, B.S. Lakshman Reddy and R. Gopi participated in the ICAR sponsored online Winter School on Advances in Social Science Research and Evaluation organised by ICAR-NAARM and they share their experiences in this Meeting Note.

CONTEXT

It is no coincidence that training programs are integral to Social Sciences. Social Science proponents need to arm themselves with the latest inter-disciplinary analytical tools, trends and approaches if they are to usher in foolproof investigations relating to discovery of new facts or verification of old facts, their sequences, inter-relationships, causal explanations, and the laws that govern them. This branch of science has grown exponentially in recent decades, thanks to the rigorous experience-sharing sessions of experts. These passionate experts disseminate their learning to younger colleagues and emphasize upon the need to improve the quality of research and writing. This indicates the need and importance of a training program inspite of the availability of several online and offline learning resources. The education sector in India has been built upon the potential of digital platforms more than on any other sector, and this training program is a standing testimony to our institutional readiness amid the all-pervasive fluid situation provoked by the COVID-19 pandemic.

ABOUT THE TRAINING PROGRAM

It was a 21-day ICAR sponsored programme organised in online mode. P. Venkatesan, Principal Scientist, Extension Systems Management Division, served as the Course Director. Bharat S. Sontakki, Principal Scientist & Head, Extension Systems Management Division, and N. Sivaramane, Principal Scientist, Agri-Business Management Division were the Course Co-ordinators.

The specific objectives of the training were to: (i) equip the participants with the latest knowledge, skills, and innovative practices necessary for conducting impact-oriented research and evaluation; (ii) familiarise the participants with advanced methodology and tools of analysis; and (iii) facilitate networking among the participants for inter-institutional research. The target audience was the entry and middle-level NARES professionals working not below the rank of Assistant Professor and its equivalent in Agricultural Universities/ICAR Institute/other institutes involved in technology transfer. The training program benefitted 40 participants across the country and 25 experts from central and state institutes served as resource persons, covering 48 technical sessions.

Profile of the participants

Altogether 40 participants, from 14 different states and two union territories of the country, took part in the Winter School. In terms of disciplines, around 51 percent of the participants were from extension education comprising agriculture, veterinary and fisheries. Around 75 percent of the participants were from State Agricultural Universities (SAUs). Teaching faculties/researchers in agricultural economics and agricultural statistics too participated in the programme.

INAUGURAL SESSION

The inaugural session was graced by A.K. Singh, Deputy Director General (Agricultural Extension), ICAR, New Delhi. Singh spoke on the need for social scientists to be grounded and be well-informed on the government schemes and the changing face of extension, that is supported by technology and social media. As the private sector participation in extension is expected to increase further, he emphasized that the extension personnel in public institutions need to upgrade their domain and social media skills. During his address, Ch. Srinivasa Rao, Director, ICAR-NAARM called for inter-disciplinary and multi-institutional collaborations and asked the scientists to strive for evidence-based pedagogy and policy advocacy.

A screenshot from the inaugural ceremony

TECHNICAL SESSIONS

The technical sessions were rendered not only by established researchers and experts in the Social Science domain but also by the early and mid-career professionals who have come up with something new and interesting in research work. In all, there were 48 sessions catering to the theoretical, practical, and hands-on training needs of the participants. All the sessions were interlinked and delved

deep into the strong foundations of theory, and subsequent discussions dealt with promising research tools in conjunction with practice datasets within the boundary of the logic that the theory could permit. Only three sessions were organized per day, giving sufficient time for the participants to refresh or grasp, and then reflect on the topic introduced. The participants were made to appreciate the amount of theory that has to go into model building, hypothesis testing, interpretation of outputs and much more.

Theoretical underpinning

Social Science researchers come across numerous issues that are not only newer to address but also larger in scale, the consequences of which may hitherto be unknown. The need for newer ways or modified approaches can always be felt and triangulation is just around the corner. There may be countless analytical tools, but none can supersede the need for a strong theory in establishing the cause-effect relationship. Without sufficient theoretical backup, neither the merit of the issue at hand nor the credence of the analytical tool can be realized. Understandably, the training program followed a modular approach made up of two modules viz., (i) Starter module; and (ii) Pathfinder module.

Pedagogy of the training program

The starter module was designed to provide extensive coverage to the basics of Social Science research comprising the scientific approach, research process, designs, measurement, sampling frameworks, data collection methods and techniques, analysis and interpretation. The pathfinder module, however, primarily focussed on good practices in advanced research methods, ethical considerations, project evaluation, writing convincing research proposals and high-quality publications. The pedagogy of the training program ensured that the theoretical and logical aspects were delivered in a pleasant manner, sans rhetoric, so that the participants could visualize the entire model building process of any evaluation technique step-by-step. Moreover, hosting the training program in online mode also provided an opportunity to invite more resource persons, especially from outside the host institution, thus providing the participants a diverse mentor base.

Practical orientation

The practical sessions were largely laced with real-world data that the experts had actually used in their research. This made the entire model-building process authentic and the interpretation of the statistical outputs relatable. The sessions were organized meticulously, after the theoretical base was well-established, driving home the message that it is the theory that one needs to look at in establishing any cause-effect relationship. As the research design, sampling methods and data collection procedure were also sufficiently covered during the theoretical sessions, the participants were able to interact energetically. 'No one answer is the correct answer' was the norm. The anxiety

of addressing a problem was balanced with the excitement of learning something new. The resource persons often said that however great the statistical software package is, it can only lead to GIGO (Garbage In and Garbage Out) if the logic goes haywire. The experts also elaborated on the interpretation of the results, often inviting the participants to share their interpretation of a slightly different scenario.

Hands-on training

Statistical software orientation was another key feature of this training program. The practice datasets, mostly extracted from real-life research, were shared earlier with all the participants over WhatsApp and email. On prior instructions, the participants had also installed the open-access and trial versions of the statistical software packages, such as R, Bluesky, AHP analyzer, STATA, and Nvivo 12. The trainers encouraged the participants to start engaging with packages like 'R' for their research, and also urged their postgraduate students to use them widely. The R-scripts or syntaxes, once constructed, could be used for analyzing identical issues with minor modifications in the variables taken up, and thereby, save time and effort. Since many of the high-impact factor journals do ask for R-scripts employed in the study, the use of a statistical software package also improves the reliability of the study's findings and increases the chances of its publication in the desired journal.

Participants' feedback on key hands-on training sessions

No.	Hands-on training session	Resource person	Participants' feedback
1.	Thematic analysis	P. Venkatesan ICAR-NAARM, Hyderabad	"…[a] refreshing take on qualitative data analysis"
2.	Structural equation modeling	P. Sethuraman Sivakumar, ICAR-CTCRI, Thiruvananthapuram	"…evocative learning with real-life examples"
3.	Socio-metric analysis	Sreeram Vishnu, KAU, Wayanad	"…effective lecture on social structure analysis"
4.	Limited variable regression models	N. Sivaramanae ICAR-NAARM, Hyderabad	"…outstanding focus on the interpretation part"
5.	Regression discontinuity design	A. Dhandapani, ICAR-NAARM, Hyderabad	"… learned something new and useful"
6.	Propensity score matching	N. Sivaramanae ICAR-NAARM, Hyderabad	"…yet another gem in the ever-evolving world of impact assessment"
7.	Meta-analysis	D. Thirunavukarasu TANUVAS, Villupuram	"…excellent way of analyzing in MS Excel"
8.	Scale construction	P. Sethuraman Sivakumar, ICAR-CTCRI, Thiruvananthapuram	"…outstanding conceptual clarity."
9.	Projective technique	V. K. J. Rao ICAR-IIHR, Bengaluru	"…unique in retaining participants' attention and further engagement"
10.	Analytic Hierarchy Process (AHP)	S. K. Soam ICAR-NAARM, Hyderabad	"…. decision making had never been taught this easily"

Concept note presentation

Concept note presentation by the participants was another marvellous elementof this training program. The participants were divided into eight groups making sure that the group is heterogeneous in terms of locale as well as gender. Orientation sessions were also conducted by sensitizing the learners on the principles and practices of concept note preparation. The participants were also asked to lay more emphasis upon the problem statement and decide on analytical tools based on the objectives of the study.

A panel of experts was formed to evaluate the presentations comprised of P. Venkatesan, N. Sivaramanae, B. Ganesh Kumar and K. Kareemula of ICAR-NAARM, Hyderabad, and P. Sethuraman Sivakumar of ICAR-CTCRI, Thiruvanathapuram. The participants, with their enthusiastic presentations, tried bringing value to the table which was equally appreciated by the panelists. The presentations were evaluated based on their problem statement, objectives, research questions, sampling framework, analytical tools, input-activity-output-outcome matrix, and budget estimation. The panelists provided feedback and highlighted that no two concepts were the same, and all the presentations were professional in nature despite being prepared in a short span.

INNOVATIVE ASPECTS OF THE WINTER SCHOOL

- Augmented offline or near-offline training sessions with multi-instructional strategies over multi-interactive platforms for real-time responses to the queries raised.
- Rigorous practice of the learning logs every day wherein the participants were invited randomly, ensuring active all-round participation, as well as sharing of their reflections, or take-home messages from the previous day's deliberations.
- Exposure to the much-unaddressed need for quality research/teaching using qualitative data with a focus on triangulation for effective decision-making in agriculture.
- Theoretical sessions held with a subtle directive of the need for choosing analytical tools that suit the research objectives and not vice-versa.
- Emphasis on the use of open-access statistical software packages, like 'R', for conducting simple to complex analysis in order to ensure that the syntaxes/scripts are saved for all time for a researcher to share the codes for wider use and reference, or to modify variables and test any new dataset of a related study with ease.
- Focus on inter-disciplinary and trans-disciplinary aspects of research and evaluation for better outcomes and strong networking.

VALEDICTORY SESSION

Post the scheduled sessions, participants were required to fill up a post-training feedback form. At the end, the Course Director shared that despite the entire 21-day training program being organised in online mode, most of the participants gave their overall rating as either 'outstanding' or 'excellent' in terms of content, delivery and utility of the technical sessions conducted. The participants also shared that the emerging trends in Social Science research were extensively covered with the intended tools of analysis and practical examples. The exposure to various open-source and licensed statistical software packages was also highlighted by the participants.
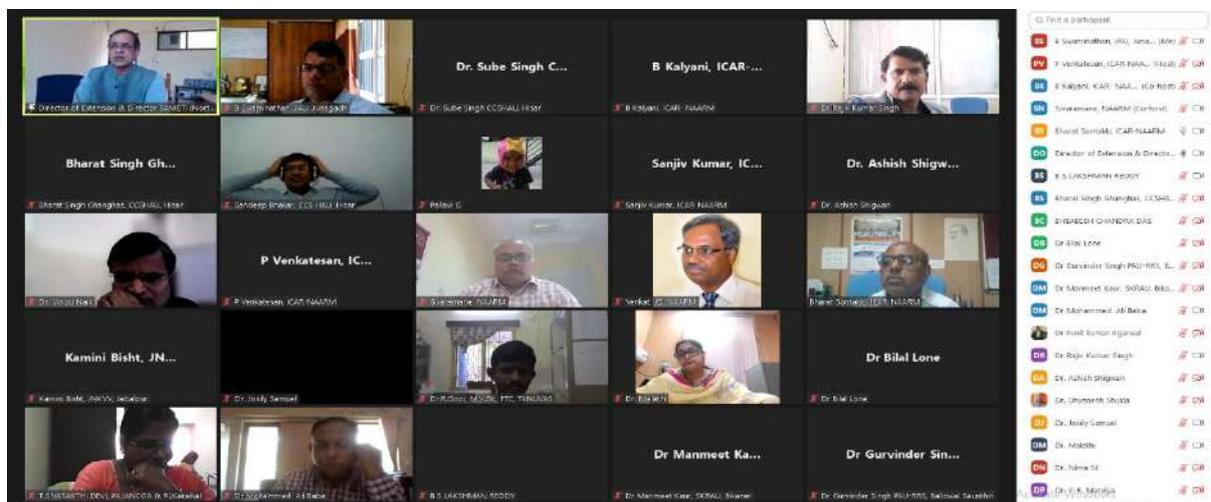

Valedictory session in progress

In his special address, G. Venkateshwarlu, Joint Director, ICAR-NAARM, emphasized the importance of networking and the need for multi-institutional, inter-disciplinary, and trans-disciplinary studies for further progress in Social Science disciplines. V. Venkatasubramaniam, Director, ICAR-ATARI, Bengaluru, delivered the presidential address and drew the attention of the participants to the increasing need for capitalizing the output from Social Science research for policy prescriptions in overall social development to whatever degree possible. He hoped that the researchers in Social Science, apart from focussing on the traditional domains dealing with production and productivity, will also focus on the grey areas of entrepreneurship and supply/value chain analysis. He hoped that the training program had provided some new leads and fresh perspectives to the participants in this regard.

Lasting impressions

The Winter School was top-notch in its delivery without any compromise on quality despite being conducted entirely online. The organizers ensured to provide a near-offline experience to the participants with real-time constant engagement over WhatsApp group, day-to-day feedback over learning logs, prior sharing of datasets and open-source platform links for espousing participant interest and readiness, along with instantaneous sharing of the session recordings and materials for more practice and clarity. The participants were made to realize the importance of keeping themselves abreast on the subject, and the need to be in tune with national and international research projects, government flagship schemes, and private sector participation vis-à-vis agriculture. The training program was also crystal clear in its message that social scientists should be ardent enough to come out of their self-constructed echo chambers, if any, and constantly engage in gauging the pulse of the society that has been woven over time with innumerable quantitative and qualitative traits. In no uncertain terms, we understood that the mark of any social scientist worth their salt is to conduct research studies with passion, perseverance and pragmatism, together with a need to listen and find merit in alternate points-of-view for possible course correction. For the overall social development of India, social scientists should adhere to all these qualities that will not only enrich the domain but also the country.
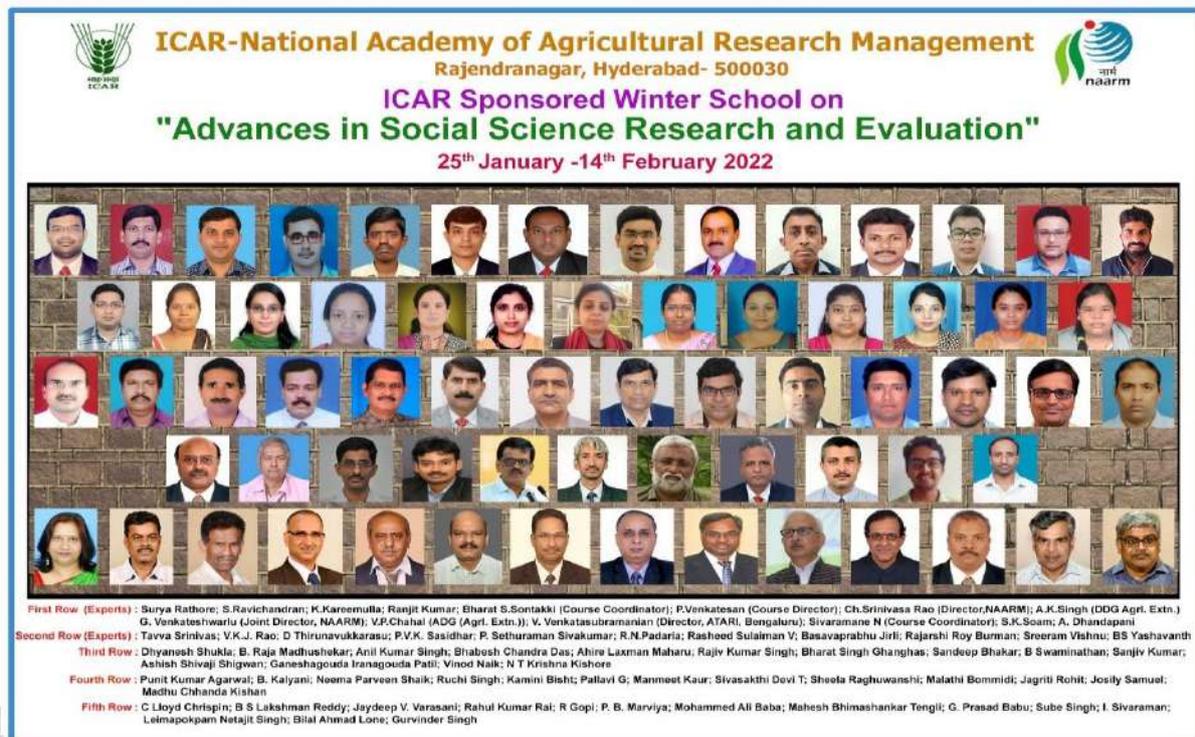
Organizing committee members, experts and participants

FUTURE TRAINING NEEDS

Despite the merits of the online training program, the participants expressed the need for organizing future programs in offline/physical mode for better engagement, practice and retention of learnings. Some of the participants were also clear on the need for technical sessions on linear programming and goal programming, which could be very useful while making complex decisions or analyzing problems with several objectives that are at odds with each other. The relevance of exposure to the National Sample Survey Organization (NSSO) data on conducting the much-needed longitudinal studies in agriculture was also recommended. Above all, the need for orientation of teaching and research faculties of Social Science on the upgraded BSMA Post Graduate (PG) syllabus was put forward by all the participants, as it would enhance the overall effectiveness and quality of PG teaching and research across the country.

Dr. B. Swaminathan, Assistant Professor, at Department of Agricultural Economics, College of Agriculture, Junagadh Agricultural University, Junagadh – 362001, Gujarat. (Email: beswami@gmail.com)

Dr. B. S. Lakshman Reddy, Assistant Professor & Head, Department of Social and Allied Sciences, College of Horticulture, University of Horticultural Sciences, Bengaluru – 560065, Karnataka. (Email: bslreddyextn@gmail.com)

Dr. R. Gopi, Assistant Professor & Head, Farmers' Training Centre, Tamil Nadu Veterinary and Animal Sciences University, Enathur, Kancheepuram – 631561, Tamil Nadu. (Email: drgopiext@gmail.com)