Marching together extended online roles of research trainings: Inclusive learning during pandemic

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ABSTRACT

The libraries have been influential for outreaching the academic community and displaying extensions of responsibilities for learning purposes. In the higher education system, Universities libraries are playing a pivotal role in research programs, training, and other support services. In India, ICSSR has been providing training support for higher education institutions under which libraries or enhancing the research skills of scholars. The present paper reflects efforts and outcomes of the training programs conducted by Dr. B R Ambedkar Central Library, Jawaharlal Nehru University, New Delhi. This study would be able to create awareness among the institutions that virtual/online courses support learning and provide an opportunity for learners to update their knowledge.

1. INTRODUCTION

There is a need for the training program, Workshop, Pre-Conference workshop, and Faculty & scholar development program to tackle research development, innovation, and new ideas with the current age of the 21st century. The training programs are intended to benefit academics with some of the basic and advanced utility of database management, computer, and data analysis and interpretation of objective and hypothesis of doctoral research else

project research. Such programs include an experimental approach by adding together various techniques such as theoretical lectures, smart hands-on experience, etc. for both kinds of quantitative and qualitative data analysis.

The courses in social science research methodology are designed to disseminate and learn knowledge about the scientific way of research to link with qualitative as well as the quantitative methods to instill guidance among the young scholars and researchers. These processes introduce advanced techniques for accurate, rational, and scientific behavior of research. The aims to update various academicians about the advanced techniques including the application of statistical packages are in vogue. The software applications include SPSS along with "R for use" in various areas of social sciences as well as in sciences. The program is especially intended for those who are new to research areas and looking towards survey method research, as well as secondary data-based research. Few pre-requisites were assumed in the form of understanding of data processing and data analysis.

Consideration of the idea and extension of the research; and its theoretical foundations, expansion of knowledge on qualitative and quantitative aspects of research, the investigation and application of statistical reasoning in research, and various techniques are very much intricately related in social science research. Clarifying various research ethics and plagiarism issues, and share knowledge about research grants and how to write proposals for them are a few of the myriad areas of academic pursuits.

1.1 BACKGROUND

Due to the pandemic, the academic institutions are closed, so it was felt appropriate to organize such a course to benefit social science researchers. The highlight of the study was the methodologies and statistics adopted in social sciences research involving library practices and resources.

The study is based upon the training program conducted in Dr. B. R. Ambedkar Central Library, Jawaharlal Nehru University, New Delhi, from 5th to 14th April 2021. It was a 10-day research methodology course for a social science discipline research which was sponsored by the Indian Council for Research in Social Sciences (ICSSR), Ministry of Human Resources Development, New Delhi. The course focused on quantitative and qualitative research methodology in the social sciences.

The purpose of the study was to familiarize participants with basic research concepts, research paradigms, methods, research design, sampling strategies, developments of research tools, the procedure for data and value analysis, and research ethics. The course framework is designed with an emphasis on interactive psychometric sessions, quantitative and qualitative data analysis, as well as ways to write research reports, articles, and articles. In addition, participants will also be exposed to fieldwork and consultation of library resources for research purposes. The course was expected to be beneficial to researchers from all disciplines of the social sciences.

Eligibility / Selection Criteria for the study was the registered M. Phil. / Ph. D./pdf students from any Indian university/research institute of any department of social sciences. The course was interdisciplinary in nature and scholars from different fields of the social science discipline participated.

The awareness about Research Methodology and Techniques was spread on various websites. The advertisement was circulated on social networking sites, e-mail, and WhatsApp. The purpose of the study was to enrich the scholars in social sciences about the research methodology course.

2. REVIEW OF LITERATURE

The outbreak of COVID 19 created a threat to life where it becomes mandatory to face the challenges and issues of information literacy courses. The courses are offered virtually by the universities to assist the research scholars in enriching their learning. Information literacy education has several features, such as "prompt response to information needs, recommending authentic information sources to users, and resisting misinformation" (Guo and Huang, 2021; Tudevdagva, Sodnom, and Erdenechimeg, 2021) described a test and case study of self-evaluation of online courses during the pandemic time. The government has announced online teaching and learning module, and the educational institutions did not get sufficient time for the preparation of modules. All courses of the Mongolian University of Pharmaceutical Sciences switched to online lessons. The study focused on the evaluation process of e-learning based on a structure-oriented evaluation model. Almaiah, Al-Khasawneh, and Althunibat (2020) explored the challenges facing "the ongoing e-learning systems and investigated the main factors that support the utilization of e-learning systems" during the pandemic. The student's perception was analyzed in a study regarding the use of e-learning methods and platforms. The observations such as "higher education institutions in Romania were not prepared exclusively for online learning" due to the technical issues, lack of technical skills among the teachers, and the teaching pedagogy suitable to the online environment (Coman et al., 2020, Kanaujia, Kumar, and Dwivedi, 2020). The students generally prefer "offline meetings because of all types of student interactions, such as student-students, student-content", and student-teacher. Students also enjoy performing in small group work in an online environment, which shows the application of blended learning (Meulenbroeks, 2020). Hughes, Henry, and Kushnick (2020) highlighted the potential strategies to incorporate the modules and reality of the pandemic into their curriculum. They also focused on the situational factors (NCBI) that can affect teaching and learning. Blended learning of teaching and learning by University Grant Commission and New Education Policy by the MHRD, Government of India suggests the benefits of the online training program and it enhances the academics (UGC).

3. OBJECTIVES AND METHODOLOGY

The main objective of the study is to create awareness among the institutions that virtual courses support learning and provide an opportunity for learners to update their knowledge.

The other objectives are such as:

- To investigate the discipline-wise distribution of the participants.
- To find out the state-wise applicants attended the course.
- To study the regional and discipline-wise resource persons contributed in the course.
- To evaluate the feedback responses received from the participants.

a. Methodology

The study is based on the research methodology course sponsored by the ICSSR, New Delhi. The applications were invited from the participants pursuing Ph.D. in various disciplines. The chief aim of the course was to enlighten the research scholars on different aspects of the research and also the tools available and accessible to support the scholarly work.

An application form was designed through Google Forms, and collected data were analyzed. A total of 30 participants were approved to attend the mentioned course. The resource persons were selected based on the themes

included in the course. The advertisement of the course was given on different academic and social medial platforms.

b. Statistical Data Analysis

Descriptive Statistics was performed on the data collected from a research methodology course sponsored by the ICSSR, New Delhi. Number & percentage and tabulation have been done using Microsoft Excel.

4. OUTCOMES OF DATA ANALYSIS

The data collected are tabulated below for analysis and interpretation.

4.1 Applications received and approved from different Geographical regions

Table-1. No. of applications received and approved and Status of the applications based on the Geographical area

No of Applications received*	Approved		Total
384	30		384
Local Applications received (JNU)	State Applications received (Delhi/NCR)	Outside the State Applications received (Outside)	
53	41	290	384

Table 1 revealed the number of applications received and approved and the status of the applications based on the regions. Out of 384 applications, 30 were approved for the workshop. The applications received locally were 53 and 41 from Delhi/NCR.

4.2 Gender–wise distribution of application

Table-2. Applications received and approved

Type	Category	No of applications received (%)	No of selected (%)	% of selected from total applications received
Gender	Male	193 (50.3)	14 (46.7)	3.6
	Female	191 (49.7)	16 (53.3)	4.2
	Total	384 (100)	30 (100)	7.8
Geographical diversity	Local Applications received*(JNU)	53		13.8
	State Applications received*(Delhi/NCR)	41		10.7
	Outside the State Applications received*(Outside)	290		69.8
	Total	384		

Table 2 talks about the distribution of participants among the gender and geographical diversity. The above table provides a glimpse of the total number of applications received for the workshop. There were 384 applications received, and out of that, 30 were approved.

Various applications and participation interests

Table 2 revealed the number of applications received from Jawaharlal Nehru University, Delhi. Out of 53 applications received locally, 10 were approved for the workshop.

The number of applications received from Delhi/NCR is presented in Table (2). Out of 41 applications, 10 applications were finally approved. The above table displays the number of applications received and selected from different states. Out of 268 applications, 10 were selected to be included in the workshop.

4.3 Discipline wise breakup of applications received

a. Discipline wise status of received applications

Table 3 (a) - Discipline wise status of received applications

S. No.	Discipline /subject	No. of applications received	S. No.	Discipline/subject	No. of applications received
1	Agriculture	4	30	International Relations	5
2	Anthropology	3	31	Labor Studies	1
3	Arabic Literature	1	32	Language	24
4	Arts	3	33	Law	15
5	Botany	2	34	Library & Information Science	14
6	Business Administration	1	35	Literature	7
7	Chemical Engineering	1	36	Management	23
8	Chemistry	5	37	Marketing	6
9	Commerce	29	38	Mass Communication & Journalism	14
10	Communication	2	39	Mathematics	4
11	Computer Science	4	40	Mechanical Engineering	2
12	Criminology	1	41	Microbiology	1
13	Cultural Studies	1	42	Musicology	1
14	Demography	1	43	Physical Education	4
15	Developmental Studies	1	44	Physics	4
16	Disability studies	1	45	Physiology	1
17	Disaster Research	1	46	Political Science	14
18	Ecology	1	47	Population Studies	4

19	Economics	26	48	Psychology	17
20	Education	41	49	Public Administration	3
21	English Literature	2	50	Rural Management	2
22	Entrepreneurship	1	51	Sanskrit	2
23	Environmental Studies	1	52	Social Work	4
24	Finance	2	53	Sociology	15
25	Gender Studies	5	54	Statistics	12
26	Geography	16	55	Tourism Management	1
27	Health Studies	1	56	Translational Studies	2
28	History	15	57	Zoology	4
29	Home Science	3	58	Un Mentioned	3
Total					384

Table 3(a) revealed the number of applications received from the scholars who belonged to various disciplines. Total 384 applications were received, 41 applications from Education, followed by Commerce with 29 applications. The applications from economics subjects were 26, 24 from languages, and 23 from management. Similarly, from other disciplines, too many applications were received, such as 17 applications from Psychology, from Geography 16 applications, 15 each from law and Sociology, and 14 each from Library & Information Science, Mass Communication & Journalism, and Political Science received. Few applications from other disciplines have also been received as Statistics, Agriculture, Computer Science, Gender Studies, Marketing, Mathematics, etc.

b. Discipline wise breakup of the selected applications

Table 3 (b) - Discipline wise status of selected applications

S.No.	Discipline/subject	No of the applications selected	S.No.	Discipline/subject	No of the applications selected
1	Arabic Literature	1	11	International Relations	2
2	Communication	1	12	Law	2
3	Demography Studies	1	13	Library and Information Science	1
4	Disaster Research	1	14	Management	1
5	Economics	2	15	Mass Communication	2
6	Education	1	16	Physical Education	1
7	Environmental Law	1	17	Psychology	3
8	Geography	3	18	Social Work	1
9	History	1	19	Sociology	2
10	Human Rights	1	20	Teacher Education	1
			21	Women and Gender Studies	1
				Total	30

Total 30 applications were selected from different disciplines/subjects and are presented in table 3(b). 3 applications each from Geography and Psychology subject, 2 each from Economics, International Relations, Law, Mass Communication and Sociology. 1 each application from other disciplines like Arabic Literature, Communication, Demography Studies, Disaster Research, Education, Library and Information Science, etc.

4.4 Demographic status of participants

Table 2 displayed the gender-wise total number of applications received and selected for the workshop. Out of 384 applications, 193 applications were received from the male participants and 191 from the females. In addition, 16 applications from the females were shortlisted and 14 from the males.

4.5 Regional or state-wise distribution of the applicants

Table. 4 - Regional or state-wise distribution of the applicants

S. No.	State-wise	No of applications received	No of selected
1	Andhra Pradesh	6	1
2	Assam	2	
3	Bihar	3	
4	Chhattisgarh	4	
5	Delhi NCR + JNU included	94	10+10
6	Gujarat	2	1
7	Haryana	2	
8	Himachal Pradesh	2	
9	Jammu & Kashmir (J&K)	10	1
10	Jharkhand	3	1
11	Karnataka	7	1
12	Kerala	3	
13	Maharashtra	24	
14	Mizoram	5	2
15	Madhya Pradesh (MP)	18	
16	Odisha	1	
17	Punjab	9	
18	Rajasthan	4	
19	Sikkim	1	
20	Telangana	6	1
21	Tamil Nadu	33	1
22	Uttar Pradesh (UP)	115	1
23	Uttarakhand	4	
24	West Bengal	4	
25	Not Mentioned states	22	
	Total	384	30

Table 4 demonstrated the regional or state-wise applications received and selected for the workshop. Total 384 applications were received from different states. Out of 384, the majority (115) of applications from UP, followed by 94 applications from Delhi NCR (including JNU), were received, 18 from MP, and 10 from J &K were received. Few applications from other states were also received. A total of 30 applications were selected for the workshop. Out of 30, 20 applications were selected from Delhi NCR (including JNU), trailed by 2 from Mizoram and 1 each from Andhra Pradesh, Gujarat, Jammu & Kashmir (J&K), Jharkhand, Karnataka, Telangana, Tamil Nadu, and Uttar Pradesh (UP).
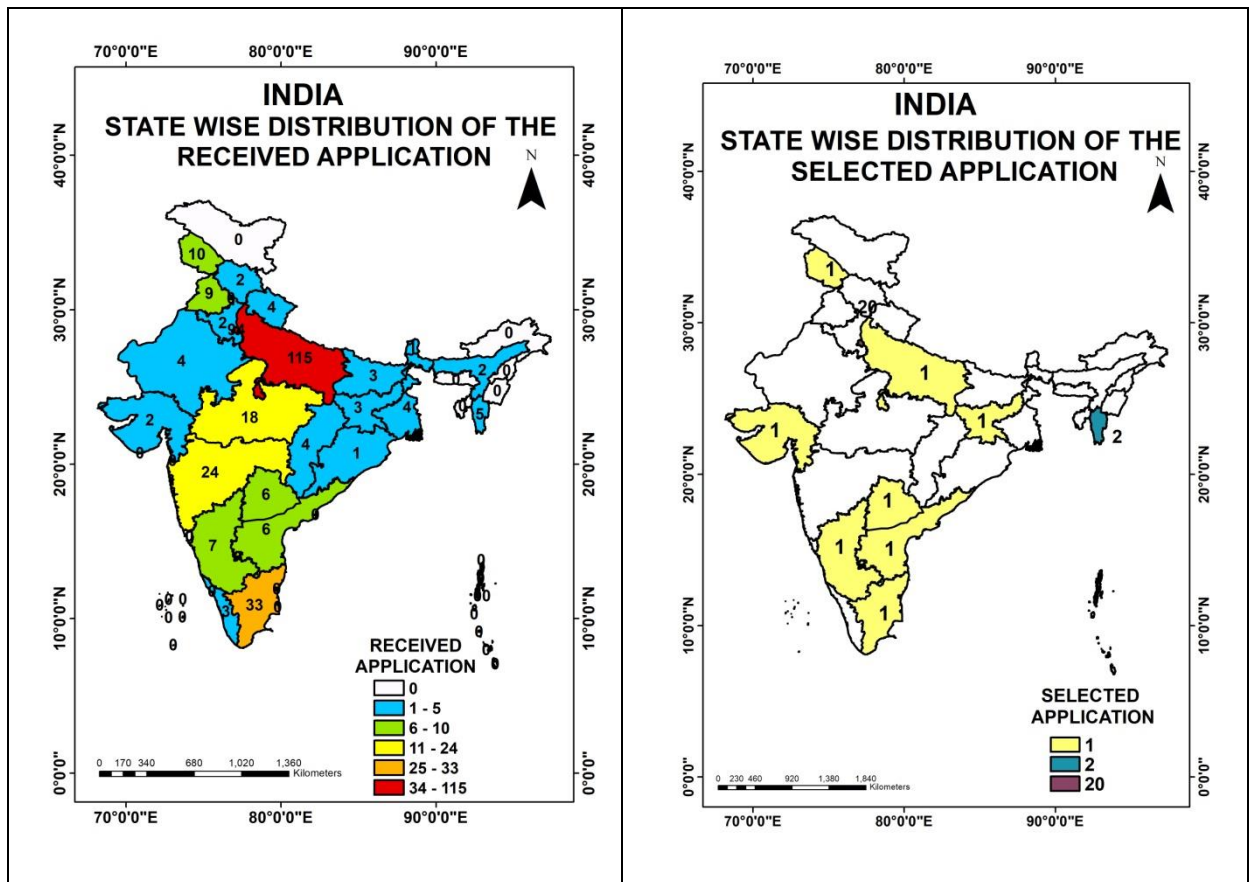

Fig-1. Regional or state-wise distribution of the applicants

4.6 Regional and discipline wise representation of Resource Persons

The resource persons from different disciplines, regions, and states were selected to contribute their expertise and share their experiences with the participants.

Table.5 - Regional and discipline wise representation of Resource Persons

S. N.	Region of Resource person	Responses	S. N.	The subject of Resource person	Responses
1	Andhra Pradesh	1	1	Computer Science	1
2	Chhattisgarh	1	2	Humanities	1
3	Delhi	12	3	Language& Literature	1

4	Himachal Pradesh	1	4	Social Science	19
5	Jammu & Kashmir	1	5	Statistics	1
6	Punjab	1			
7	Telangana	1			
8	Uttar Pradesh	2			

Table 5 represented the contribution of resource persons from various disciplines and regions who contributed their expertise and share their experiences with the participants. It is observed from the table that 12 resource persons from Delhi were part of the course, and 3 were from Language& Literature discipline. The workshop focused on the research methods used in the Social Sciences, so 19 resource persons have been invited to share their expertise. The experts from other regions also contributed their knowledge and enriched participants such as Uttar Pradesh, Andhra Pradesh, Chhattisgarh, Himachal Pradesh, Punjab, and Telangana. The resource persons from other disciplines shared their expertise with the participants like Computer Science, Humanities, and Statistics.

4.7 Feedback Responses from the participants.

Table. 6.1 - Feedback responses from the participants

S No	Aspect of Feedback	Rating scale 0 to 10 for N=30 Participants					
		0=Poor Feedback 5=Average Feedback 10=Excellent					
		0 - 5	6	7	8	9	10
1	Relevance of the Course	0	1 (3.3)	0	4 (13.3)	7 (23.3)	18 (60)
2	Applicability of the Course for present job	1 (3.3)	0	2 (6.7)	3 (10)	6 (20)	18 (60)
3	Extent of the coverage of the Course Content	1 (3.3)	0	0	7 (23.3)	8 (26.7)	14 (46.7)
4	Learning Values in terms of 1. Concepts 2. Knowledge 3. Analytical abilities 4. Broadening Perspectives	1 (3.3)	0	0	4 (13.3)	8 (26.7)	17 (56.7)
5	Appreciating and implementing experiential Methodology wherever applicable	0	0	2 (6.7)	4 (13.3)	7 (23.3)	17 (56.7)
6	Improving use of appropriate Audio-Visual Technology	2 (6.7)	0	4 (13.3)	5 (16.7)	7 (23.3)	12 (40)
7	Effectiveness of programme delivery/ Communication	0	1 (3.3)	0	4 (13.3)	10 (33.3)	15 (50)
8	Competence of Resource Persons	0	0	2 (6.7)	_	9 (30)	19 (63.3)

9	Effectiveness of Skill Development	0	2 (6.7)	1 (3.3)	1 (3.3)	11 (36.7)	15 (50)
10	Relevance and Usefulness of the reading materials	0	1 (3.3)	1 (3.3)	8 (26.7)	7 (23.3)	13 (43.3)
11	Duration of the programme	1 (3.3)	_	4 (13.3)	5 (16.7)	4 (13.3)	16 (53.3)
12	Scope of Implementation	0	1 (3.3)	2 (6.7)	3 (10)	10 (33.3)	14 (46.7)
13	Keeping abrest of the latest development in your discipline/ subject	0	0	1 (3.3)	8 (26.7)	7 (23.3)	14 (46.7)
14	Research Orientation	0	0	1 (3.3)	3 (10)	8 (26.7)	18 (60)
15	Use of Innovative and Participative Learning Methods	0	0	2 (6.7)	5 (16.7)	10 (33.3)	13 (43.3)
16	Any other aspects of impact on professional orientation and development	0	0	3 (10)	4 (13.3)	8 (26.7)	15 (50)

Table 6.1 provides a glimpse of the feedback responses received from the participants. It is evident from the table that the majority of the participants (60%) shared that the course was relevant to them and the course was applicable for the present job. The extent of the coverage of the course content was satisfactory as revealed by the participants with 23.33%, 26.67%, and 46.67%. 50% of the participants disclosed that the deliveries of the deliberations were effective and 63.33% shared that the resource persons contributed in the course were competent to address their queries. Around 57 % of respondents said that they learn the concept, knowledge, analytical aspect and broadening perspectives as well as appreciating the experimental methodology. 46.67% of the participants highlighted that the course was beneficial in keeping abreast of the latest developments in the respective discipline.

Table 6.2 - Feedback responses from the participants

S.No.	Aspect of Feedback	Mean response	Min	Max
1	Relevance of the Course	9.4	6	10
2	Applicability of the Course for present job	9.2	5	10
3	Extent of the coverage of the Course Content	9.1	5	10
4	Learning Values in terms of 1. Concepts 2. Knowledge 3. Analytical abilities 4. Broadening Perspectives	9.3	5	10
5	Appreciating and implementing experiential Methodology wherever applicable	9.3	7	10
6	Improving the use of appropriate Audio-Visual Technology	8.7	2	10
7	Effectiveness of programme delivery/ Communication	8.7	2	10
8	Competence of Resource Persons	9.3	6	10
9	Effectiveness of Skill Development	9.5	7	10
10	Relevance and Usefulness of the reading materials	9.2	6	10

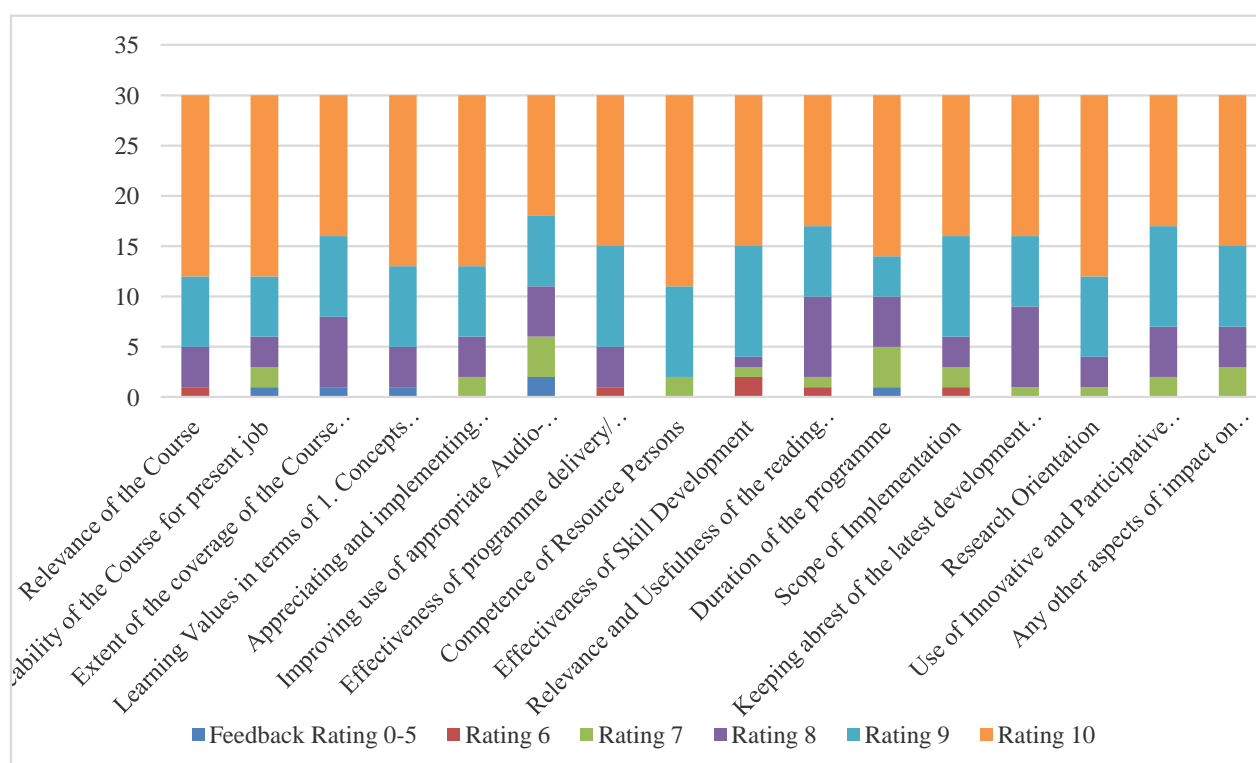| 11	Duration of the programme	9.0	6	10
12	Scope of Implementation	9.0	5	10
13	Keeping abreast of the latest development in your discipline/ subject	9.1	6	10
14	Research Orientation	9.1	7	10
15	Use of Innovative and Participative Learning Methods	9.4	7	10
16	Any other aspects of impact on professional orientation and development	9.1	7	10

Fig-2. Feedback responses from the participants

Qualitative Analysis of Feedback comments also showed that fair and positive learning about the research methods. Overall, online learning is playing a great role in the development of academicians.

5. THE CONTENT AND THE TRAINERS

The structure of the Social Science Research Methodology curriculum is designed keeping in view the needs of the social science research scholars. The main aim of the workshop was to assist the academic community to update themselves with various concepts and applications of techniques in the research. The course includes a combination of theoretical deliberations and practical application of tools in the research.

6. CONVERSED CASE STUDIES/RESEARCH PAPERS

Few case studies/research papers were discussed by the resource person has been done for example Sharing the Research Insides and Preparations, Elementary Descriptive Statistics in Public Policy Research: Do's and Don'ts.

Data sources/library sources discussed, Conceptual Understanding for Starting the Research, Knowledge Communication, and Search Strategy, Empirical Research in Social Sciences: Some Methodological Issues, Searching Information Online: Exploring Subject Gateways, Data Management as a Part of Research Methodology, Collection of Data in Social Science Research, short Term and Long Term Time Series of Data.

Analytical tools AI-based research Techniques used for Developing Prediction Model, Introduction to Software in Research. Data Analytics with SPSS, Application in Research Exploratory Research Process in Social Sciences, Comparison of Mean Value Methods for Statistical Analysis, Correlation and Regression Analysis.

7. DISCUSSION

Within an academic discipline, there are fundamental differences in how various theories explain the assumptions, tools, and methodology specific to that discipline. The aim here was to estimate scientific attempts to develop the complex phenomenon of human behavior as well as to address problems associated with community-based research methods used in various social science disciplines. Therefore, the workshop aimed to expose researchers to the different research methods available in the social sciences and to make them appreciate the common standard of learning and practice (Sufi et al., 2018; Zalat, Hamed, and Bolbol, 2021). The workshop addressed various aspects of social research, such as the very idea of research and its scope; writing suggestions; qualitative and quantitative studies; statistical reasoning and various data analysis techniques; Professional Ethics; Research reports, and plagiarism issues. The Practical sessions included hands-on Zotero and Mendeley reference management tools and also on Turnitin and Drillbit anti-plagiarism software.

8. Evaluation by Participants/Resource Persons

The participants learned about writing the reviews and other essential things required to initiate and precede the research. The themes were selected considering the requirements of the participants. The course structure was designed in a way to benefit each participant associated with different subjects. The feedback was overwhelming from the participants and they were satisfied with the course content. The different themes were selected like research methodology, research tools, plagiarism, library services.

Quality and relevance of course contents were kept high since there is too much diversity in the social science subjects and each subject has its requirements. It was a herculean task to select the topics and cater to the needs of each participant. The participants were from various subject backgrounds such as history, law, geography, library science, etc. The course was operated through theoretical lectures and practical application of different research modules and statistical techniques. The participants were provided some generated data and computers for the application of discussed research methodology. Group participation, field survey, as well as paper writing techniques, were also the focus area in this program.

9. RECOMMENDATIONS

The recommendations to undertake the courses are such as:

- Due to the pandemic, online programs gained momentum that requires minimal IT infrastructure. Some areas are underdeveloped and students do not have access to the internet, digital resources, etc.

- Organizations need to frequently organize programmes related to research methodology or publishing ethics.

- An evaluation is a must after the course to feel the pulse of the participants.

- Feedbacks of the participants always provide the scope to improve or include the topic of their interest.

- Libraries should adopt new approaches to information literacy programmes under the new normal.

- More and more online courses need to be boosted, adoption of new teaching models, and restriction of misinformation.

10. CONCLUSION

The present study would provide a notion to the readers and professionals that organizing such kinds of programmes benefits the scholars and also encourages them to continue their research work effectively. The research methodology course is essential to carry out any kind of research whether it is qualitative or quantitative. The course is the basic need of the researchers and it is the need of an hour due to the closure of the Universities.

REFERENCES

[1] Guo, J., & Huang, J. (2021). Information Literacy Education during the Pandemic: The Cases of Academic Libraries in Chinese Top Universities. *The Journal of Academic Librarianship*, *47*(4), 102363.

[2] Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the Critical Challenges and Factors Influencing the E-learning System Usage during COVID-19 Pandemic. *Education and Information Technologies*, *25*, 5261-5280.

[3] Tudevdagva, U., Sodnom, B. & Erdenechimeg, S. (2021). The Evaluation Case Study of Online Course during Pandemic Period in Mongolia. *arXiv preprint arXiv:2105.12429*.

[4] Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. *Sustainability*, *12*(24), 10367.

[5] Kanaujia, K.S., Kumar, U., & Dwivedi, A. (2020). Building a Diverse Culture of Knowledge Delivery, Open Education and e-Learning: Opportunities and Challenges through Learner's Perspectives. *International Journal of Research in Library Science*. 6(2) 121-127. Retrieved from 10.26761/IJRLS.6.2.2020.1342.

[6] Meulenbroeks, R. (2020). Suddenly Fully Online: A case study of a Blended University Course Moving Online during the Covid-19 Pandemic. *Heliyon*, *6*(12), e05728.

[7] Hughes, M. C., Henry, B. W., & Kushnick, M. R. (2020). Teaching during the Pandemic? An Opportunity to Enhance Curriculum. *Pedagogy in Health Promotion*, *6*(4), 235-238.

[8] Sufi S, Nenadic A, Silva R, Duckles B, Simera I, de Beyer JA, et al. (2018) Ten Simple Rules for Measuring the Impact of Workshops. *PLoS Comput Biol*, 14(8): e1006191. https://doi.org/10.1371/journal.pcbi.1006191

[9] Zalat, M.M., Hamed, M.S. & Bolbol, S.A. (2021). The Experiences, Challenges, and Acceptance of e-learning as a Tool for Teaching during the COVID-19 Pandemic among University Medical Staff. *PLoS ONE*, 16(3): e0248758. Retrieved from https://doi.org/10.1371/journal.pone.0248758

Web references

➢ Retrieved from https://www.ugc.ac.in/pdfnews/6100340_Concept-Note-Blended-Mode-of-Teaching-and-Learning.pdf

➢ Retrieved from https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

➢ Retrieved from
   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7308790/pdf/10.1177_0047239520934018.pdf

➢ Retrieved from https://www.mdpi.com/2504-2289/2/1/4/pdf

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