



Short Training Course on

# Essential Elements of Research Methodology for the Professionals and Young Researchers

Financed by: Social Science Research Council (SSRC), Planning Division,  
Ministry of Planning

Organized by: Bangladesh Institute of Governance and Management (BIGM)



**Course Adviser:** Dr. Mohammad Tareque, Director, BIGM

**Course Director:** Dr. Krishna Gayen, Additional Director  
(Research) & Senior Research Fellow, BIGM

**Course Design and Coordination:** Ms. Tahmina Sultana,  
Research Fellow, BIGM

December, 2021.



## Welcome!!!

Warm welcome you all to the online training program on, '**Essential Elements of Research Methodology for the Professionals and Young Researchers**, conducted by the Bangladesh Institute of Governance and Management (BIGM), commissioned by the Social Science Research Council (SSRC), Planning Division, Ministry of Planning, Bangladesh. This training program is intended to be the first formal step of an ongoing process of learning and development, to launch and enhance the capacity of community-based researchers in a community-based participatory action research project during this pandemic situation.

This training course is designed to introduce graduate students and young researchers to the process of conducting scientific research in the field of social sciences, business, education and public health. It is a comprehensive and compact source for foundational concepts in conducting primary/micro research.

This programme will help participants to:

1. Get oriented with the concept of scientific research
2. Familiarize them with methodology, tools and techniques of research
3. Be acquainted with various stages and procedures of Academic Research
4. Be enriched with hands-on experience in conducting research to the participants

The course is divided broadly into three phases: The **First Phase** covers the theoretical aspects of research and research methodology; the **Second Phase** covers the practical experience of data collection through survey techniques (quantitative methods) and in-depth interview (qualitative method). Thereafter, participants themselves are engaged with the exercises of data entry and cleaning process and that data set used for analysis by different software. In the **Third Phase**, participants

focus on preparing research report, scientific journal publication process with referencing system (both manual and software). Finally, participants prepare reports through group activity and submit their reports. Successful completion/presentation of the report is mandatory to award the certificate.

**Course Details:**

**Duration:** 6-week long program (27 December 2021 – 05 February 2022)

**No. of Classes:** 12

**Available seats:** 30 (Thirty)

**Session Mode:** Online (zoom platform)

**Intended Participants:** Young researchers and professionals aiming to build up their career in research and development sector (both public and private).

A team of highly experienced faculty and practitioners assembled here to deliver this Programme. Class discussions and presentations integrated as far as possible within the programme design to enhance your learning experience.

We acknowledge many of the shortcomings while we were conducting the course due to external constraints embedded with own limitations. We would appreciate your feedback and suggestions.

Finally, we would like to extend our sincere appreciation to you all and hope that our consolidated efforts to go forward will be much stronger in the days ahead to come.

## Training Schedule and Contents

### Essential Elements of Research Methodology for the Professionals and Young Researchers

Day	Chapter	Content	Resource Person
Day 1 27.12.21 (Monday) 5.30-8.30 pm	Role of Social Research in Development (5.30 pm -7.00 pm)	<ul style="list-style-type: none"> <li>• Definition of research and social science research</li> <li>• Why to conduct research</li> <li>• Good vs not good researches</li> </ul>	Dr. Krishna Gayen
	Problems Formation and Formulations (7.00 pm - 8.30 pm)	<ul style="list-style-type: none"> <li>• Research problem</li> <li>• Conceptualization and operationalization</li> </ul>	Ms. Shirin Sharmin
Day 2 01.01.22 (Saturday) 3.30-6.30 pm	Research Methods and Research Design	<ul style="list-style-type: none"> <li>• Types of Research</li> <li>• Steps of research process</li> <li>• Building up Conceptual framework</li> <li>• Internal and external validity, reliability</li> <li>• Popular research design</li> </ul>	Dr. Moniruzzaman
Day 3 02.01.22 (Sunday) 5.30-8.30 pm	Quantitative Research (5.30 pm -7.00 pm)	<ul style="list-style-type: none"> <li>• Key features of quantitative study</li> <li>• Observational Study (cross sectional)</li> <li>• Experimental Study (cohort/RCT)</li> </ul>	Dr. Shajedur Rahman
	Levels of Measurement and Scaling (7.00 pm-8.30 pm)	<ul style="list-style-type: none"> <li>• Definition of variable, Types of variable, scaling</li> <li>• Central tendency and Dispersion: Mean, median, mode, standard deviation</li> </ul>	Ms. Sima Dey
Day 4 08.01.22 (Saturday) 3.30-6.30 pm	Sampling (3.30-5.00 pm)	<ul style="list-style-type: none"> <li>• Population, sample, sampling</li> <li>• Types of Sampling</li> </ul>	Dr. Krishna Gayen
	Sample size estimation (5.00-6.30 pm)	<ul style="list-style-type: none"> <li>• Sample size estimation technique</li> </ul>	Mr. Faroque Ahmed
Day 5 09.01.22 (Sunday) 5.30-8.30 pm	Methods of Data Collection/Data Collection Tools	<ul style="list-style-type: none"> <li>• Probability, correlation, regression</li> <li>• Data display and interpret data</li> </ul>	Ms. Sima Dey
		<ul style="list-style-type: none"> <li>• Methods of quantitative data collection</li> <li>• Questionnaire framing</li> <li>• Data quality check</li> </ul>	Mr. Faroque Ahmed
Day 6 15.01.22 (Saturday) 3.30-6.30 pm	Processing, Analyzing and Interpretation of Data	<ul style="list-style-type: none"> <li>• Hypothesis, hypothesis testing</li> <li>• Different significant tests (t-test, Chi-square test)</li> </ul>	Ms. Sima Dey
		<ul style="list-style-type: none"> <li>• Deciding appropriate test for analysis</li> </ul>	Mr. Faroque Ahmed
Day 7 16.01.22 (Sunday) 5.30-8.30 pm	Uses of Data Analysis with the Application Software	<ul style="list-style-type: none"> <li>• Import data from excel file to SPSS</li> <li>• Cleaning and editing of data using SPSS, Recoding data</li> </ul>	Ms. Tanzila Sultana

Day	Chapter	Content	Resource Person
		<ul style="list-style-type: none"> <li>Univariate/ Bivariate/ Multivariate Analysis</li> </ul>	Mr. Faroque Ahmed
Day 8 22.01.22 (Saturday) 3.30-6.30 pm	Qualitative Research	<ul style="list-style-type: none"> <li>Key features of qualitative study</li> <li>Difference between quantitative and qualitative study</li> </ul>	Dr. Haribandhu Sarma
		<ul style="list-style-type: none"> <li>Methods of qualitative data collection (IDI, FGD, Observation)</li> <li>Guideline preparation</li> </ul>	Ms. Tahmina Sultana
Day 9 23.01.22 (Sunday) 5.30-8.30 pm	Uses of Data Analysis with the Application Software	<ul style="list-style-type: none"> <li>Basics of qualitative data analysis</li> <li>Manual content analysis: reading, coding, identifying theme, sub-theme</li> <li>Matrix format of qualitative data analysis</li> </ul>	Mr. Ali Imam & Ms Tahmina Sultana
Day 10 29.01.22 (Saturday) 3.30-6.30 pm	Uses of Google Form	<ul style="list-style-type: none"> <li>Questionnaire construction (google form)</li> </ul>	Ms. Tanzila Sultana
	Ethical issues in conducting research	<ul style="list-style-type: none"> <li>Confidentiality of Information &amp; Ethical considerations</li> <li>Informed consent</li> </ul>	Dr. Abdur Rahim Khan
Day 11 30.01.22 (Sunday) 5.30-8.30 pm	Report Generation and Report Writing (3.30 -5.00 pm)	<ul style="list-style-type: none"> <li>Reporting Format/ Plagiarism</li> </ul>	Ms. Mowshumi Sharmin
		<ul style="list-style-type: none"> <li>Referencing System</li> </ul>	Ms. Mowshumi Sharmin
Day 12 05.02.22 (Saturday) 3.30-6.30 pm	Journal Publication (5.00 -6.30 pm)	<ul style="list-style-type: none"> <li>Referencing by Mendeley</li> </ul>	Ms. Mowshumi Sharmin
		<ul style="list-style-type: none"> <li>Guidelines for Journal Publication</li> </ul>	Ms. Tahmina Sultana

## RESOURCE PERSONS PROFILE

**Dr. Krishna Gayen** is Senior Research Fellow and Acting Additional Director (Research) of the Bangladesh Institute of Governance and Management (BIGM). She obtained her Bachelors and Masters in Statistics from Jahangir Nagar University in Bangladesh and did her PhD from Napier University in the UK. She joined the Bangladesh Civil Service in 1989 and worked in the Rural and Co-operatives Division, Ministry of Agriculture, Planning Commission, Economic Relations Division, Finance Division, Financial Institutions Division, and the Information and Communication Technology Division of the Government in different capacities. As Additional Secretary to the Government, she served as the Director General of the Bangladesh Bureau of Statistics (BBS) from July 2018 to September 2019. Her research interests include official statistics, poverty, unemployment, and inequality.



**Dr. Abdur Rahim Khan** has been serving as Associate Professor of BIGM. He obtained B.S.S (Hons) and Masters of Social Science Social Welfare from University of Dhaka as top most student. He did his M.Sc in Development Economics from the University of Bradford, England as Commonwealth Scholar and did his PhD in Sociology as ICCR scholar from University of Pune, India. He served in different capacities under Social Science Research Council for 33 years. After his retirement, Dr. Khan engaged himself in teaching at several universities as adjunct faculty. He has been teaching social science research methodology at the Bureau of Economic Research, University of Dhaka since 1990. He is a member of the Evaluation Committee and an appointed language reviewer of

Bangladesh Police Headquarter. A good number of his articles have been published by UNESCO and other reputed foreign publishers.

**Dr. Md. Moniruzzaman** is an Additional Secretary to the Govt. and currently working as the Director (Finance), Bangladesh Bridge Authority, Bridges Division. He completed his MSS in Economics from the University of Dhaka. He also did another Masters in Economics of Development from Australian National University, Australia with distinction.



Later, he was awarded PhD in International Trade from the Institute of Bangladesh Studies Rajshahi University, Bangladesh. He got his MCIPS degree on Procurement and Supply Chain Management from the Chartered Institute of Purchasing and Supply (CIPS), UK. He published several scientific articles in different national and international peer-reviewed journals. He has the experience of teaching in some renowned public and private universities in Bangladesh.



**Ms Tahmina Sultana** is academically trained in Sociology and Population Sciences from Shahjalal University of Science and Technology and University of Dhaka. Currently she is working at BIGM as Deputy Director (Research) to lead and coordinate all research activities and disseminate the research findings outside

BIGM. During her 12 years long career, she had been engaged in various health related projects focusing on maternal and neo-natal health, child and adolescent health, HIV/ AIDS and health systems of Bangladesh in various international organizations such as icddr, Population Council, Bangladesh and Action Aid. She has published several scientific papers, policy briefs, training manuals, Op-Ed in different peer reviewed international journals, national dailies based on research findings. Her research interests are health systems and policy research with the focus on governance issues.



**Ms. Sima Rani Dey** is currently working as an Assistant Professor at Bangladesh Institute of Governance and Management (BIGM) located in Dhaka. She did her graduation and post-graduation in Statistics from Jahangirnagar University. She did another masters in macroeconomic policy from National Graduate Institute for Policy Studies (GRIPS), Japan. Her research interests cover macroeconomic issues. Her previous researches focused on aggregate consumption expenditure, external debt, electricity consumption as well as carbon emissions. She has special knack to work on trade and poverty and its impact on economic growth of Bangladesh.



**Mowshumi Sharmin** is an Assistant Professor at BIGM affiliated with the University of Dhaka. Her field of research interest includes Governance, Public Policy, Political Economy, Sustainable Resource Management, Environment and Climate Change. She has obtained her Master of Public Affairs (Specialisation in Governance and Public Policy) from University of Dhaka. She has published articles in several peer reviewed international journals and many of them have been incorporated in top-tier peer reviewed conference proceedings. She would like to see herself as a professional who is contributing in social policy and political economy, environment and governance related public policy areas

**Shirin Sharmin** is currently working as an Assistant Professor at Bangladesh Institute of Governance and Management (BIGM). Prior to joining BIGM, she has worked for the leading Investment Management Company in Bangladesh for last ten years. A graduate civil engineer from BUET, Shirin completed her MBA in Finance from IBA, University of Dhaka. She also received an MBA in Marketing from Faculty of Business Studies, University of Dhaka and a Master of Economics degree



from Dhaka School of Economics, University of Dhaka. Her research interest covers capital market, investments and macro-economic issues.



**Mr. Faroque Ahmed** has completed his graduation & post-graduation in Statistics from the Islamic University, Kushtia. During his M.Sc. he got certification on “BIG DATA” analytics by Leveraging ICT for Growth, Employment and Governance Project of Bangladesh Computer Council, ICT Division, People’s Republic of Bangladesh. He’d started his career in the Banking sector but at present working as a Research Associate at BIGM. During the period of 2020 he has published four scientific research articles on different peer reviewed international journals. Recently one of his articles on machine learning has been accepted in the conference of machine learning & data science of the Stanford University, USA.

As a research enthusiast from the beginning of her student life, **Tanzila Sultana** did her bachelors and masters in economics from Jahangirnagar University and obtained her knowledge and experiences on various steps of research like survey, survey supervision, data collection, analyzing and report writing through



working in different reputable research organizations. She worked under direct supervision of many prominent researchers and economists of Bangladesh such as Dr. Mohammad Tareque, Dr. Debapriya Bhattacharya, & Dr. Minhaj Mahmud. Her primary field of research interest is Behavioral and Experimental Economics and secondary interest lie in Labor Economics and Education.

**Dr. Haribondhu Sarma** is a public health researcher trained in Implementation Science, Population Health and Social Science. Currently he is affiliated with Research School of Population Health at the Australian National University, Canberra as a Postdoctoral Fellow. Earlier, he was affiliated with icddr,b, and headed Nutrition Programme Evaluation Unit.



He published more than 70 research papers, including articles in high-impact peer-reviewed journals, book chapters, research reports, working papers, policy documents and conference papers.



**Dr Shajedur Rahman Shawon** is a clinical and public health epidemiologist with broad interests in diabetes, cardiovascular disease, cancer, obesity, and health system research. He is currently working as an epidemiologist at the Centre for Big Data Research in Health, UNSW Sydney. He studied medicine at Dhaka Medical College. He completed a Master of Public Health (MPH) from North South University, Bangladesh. Later he pursued an MSc in Epidemiology at Karolinska Institute, Sweden and then completed a DPhil (PhD) in Population Health from Nuffield Department of Population Health, University of Oxford. Dr. Shawon has researched different chronic diseases using electronically-linked large-scale routine healthcare data from UK and Sweden. He also has a special research interest in health system research in low- and middle-income countries.



**Mr. Ali Imam** is an Anthropologist and Public Health Researcher, currently working as Assistant Scientist at icddr,b. He is providing monitoring and evaluation support to the Program Management and Monitoring Unit (PMMU) of the Planning wing, Ministry of Health and Family Welfare (MOHFW). He is experienced in the areas of health seeking behavior, health system response, health surveillance, and vulnerability of risk population. He has published several research articles in various international peer reviewed journals.



**For any query, please contact**

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