# Department of Statistics,
## Assam University, Silchar-788011

## Report of the Seven Day ICSSR Sponsored Training Course in SPSS for Ph. D Students in Social Science

### September 20-26, 2016

As a part of the different training programmes organized by the Department, an application was sent to Indian Council of Social Science Research (ICSSR) to grant funds so that a workshop can be conducted to provide training to the researchers in Social Science in Statistical Packages for Social Science (SPSS). ICSSR accepted the proposal and accordingly provided funds to conduct the workshop.

Accordingly the Department organized the training program in SPSS keeping in focus the Ph. D Scholars of Social Science from 20th to 26th September, 2016 at the Department of Statistics, Assam University, Silchar. The main objective of the program were as follows:

i. Understanding data types, their arrangement and data handling
ii. Overview of Statistical tools – their purpose and limitations
iii. Performing Basic Statistical analysis and graphics in SPSS
iv. Extracting meaningful information from data and perform prediction
v. Performance of statistical tests- both parametric and non-parametric
vi. Exposure to data reducing techniques and multivariate analysis
vii. Reporting results of statistical computations

The target participants for the workshop was Registered/enrolled Ph.D student of any recognized university/institute of any North-eastern state or neighboring state in any branch of social science and humanities. Prof. Dibyojyoti Bhattacharjee, Head of the Department was the coordinator of the workshop. It is pertinent to mention here that the department possesses licensed version of SPSS 23.0.

The resource persons of the workshop were:

- Prof. Dilip C. Nath, Vice Chancellor, Assam University
- Dr. Arvind Pandey, Department of Statistics, Pachunga University College, Mizoram
- Dr. Sankaer Goswami, Department of Statistics, Guru Charan College, Silchar
- Prof. Kishore Das, Department of Statistics, Gauhati University
- Prof. Diganta Mukharjee, Sampling and Official Statistics Unit, Indian Statistical Institute, Kolkata
- Dr Tanusree Deb Roy, Department of Statistics, Assam University
- Dr. Jonali Gogoi, Department of Statistics, Assam University
- Prof. D Bhattacharjee, Department of Statistics, Assam University

- Dr. Hemanta Saikia, College of Sericulture, Assam Agricultural University, Jorhat

A total of 30 participants registered for the workshop out of which 12 of them were out-station participants. Participents were from different branches of social science viz. Library Science, Management, Business Administration, Economics, Political Science, Commerce, Social Work, Education etc. The detailed participants list are as follows:

| Name | Affiliating Institute | Designation | Department |
|---|---|---|---|
| Shibojit Choudhary | Assam University | Librarian | Library |
| Panchatapa Deshamukhya | Assam University | Research Scholar | Economics |
| Rajab Ali Biswas | West Bengal State University | Research Scholar | Education |
| Pradip Chouhan | Tripura University | Research Scholar | Economics |
| Debajit Bhuyan | Rajiv Gandhi University | Research Scholar | Economics |
| Pradipta Deb | Assam University | Research Scholar | Economics |
| Ananda Chandra Ghosh | Assam University | Assistant Professor | Political Science |
| Niranjan Debnath | Tripura University | Research Scholar | Economics |
| Shubhajit Kumar Ghosh | Visva Bharati | Research Scholar | Education |
| Happyson Gachuiwo | Assam University | Research Scholar | Commerce |
| Sword Ronra Shimray | Assam University | Research Scholar | Social Work |
| Nula Bethel Anal | Assam University | Research Scholar | Social Work |
| Angira Sarmah | Assam Kaziranga University | Assistant Professor | Management |
| Lipika Sarmah | Assam Kaziranga University | Assistant Professor | Management |
| Debanuj Khound | Dibrugarh University | Assistant Professor | Management |
| Monu Singh | North Eastern Hill University | Research Scholar | Management |
| Biplab Roy | Dibrugarh University | Assistant Professor | Management |
| Arijeet Das | Assam University | Research Scholar | Commerce |
| Bijoy Das | Assam University | Research Scholar | Social Work |
| Khushbu Barbhuiya | Assam University | Research Scholar | Political Science |
| Mungrei Gachui | Assam University | Research Scholar | Political Science |
| Abdul Basith Lasakar | Assam University | Research Scholar | Economics |
| Moses Newme | Assam University | Research Scholar | Social Work |
| Anwara Begum Mazumder | Gauhati University | Research Scholar | Women's Studies |
| Biswabijoy Bhattacharjee | Assam University | Research Scholar | Political Science |
| Tinsaye tamerat | Assam University | Research Scholar | Social Work |
| Rituparna Roy | Assam University | Research Scholar | Management |
| Sultana Mazumdar | North Eastern Hill University | Assistant Professor | Management |
| Zareen Mazumdar | Assam University | Research Scholar | Management |

In the training program stress was given to both theoretical concepts of Statistics as well as the computation of statistical tools using SPSS. Participants were also given exercise after every class, called "Activity Hour", to do the calculations in the workshop itself. This gave real time exposure of the participants to SPSS. Participants were also taken for a field visit so that they

can be exposed to real time Data Collection in SPSS friendly manner. The program Schedule of the workshop showing the topics that were covered are as below.

| TENTATIVE PROGRAMME SCHEDULE | | | | |
|---|---|---|---|---|
| | **10am – 11:30am** | **11:45am – 1:15pm** | **2 pm – 3:30pm** | **3:45pm – 5:15 pm** |
| **20.9.2016** | **INAUGURAL FUNCTION** Key note address by academicians on relevance and use of such workshops | **BASIC STATISTICS** • Central tendency • Dispersion **(DCN)** | **SPSS BASICS** • Data view and variable view • Data entry • Data coding, Recoding • Data transfer from Excel, dbase etc. **(JG)** | **DESCRIPTIVE STATISTICS AND GRAPHS IN SPSS (TDR)** Computation of basic statistics and producing graphs and diagrams |
| | | **Pedagogy: Lecture** | **Pedagogy: SPSS Training Session** | **Pedagogy: SPSS Training Session** |
| **21.9.2016** | **DATA HANDLING** • Scrutiny of data • Data cleaning **(DJB)** | **BI-VARIATE ANALYSIS (AP)** • Correlation • Simple linear regression • Prediction and residuals | **BI-VARIATE (AP) ANALYSIS IN SPSS** • Measures of Association • Correlation • Regression | **ACTIVITY HOUR (AP)** Analysis of live data by the participants and interpretation of results using tools learnt so far. |
| | **Pedagogy: Lecture** | **Pedagogy: Lecture** | **Pedagogy: SPSS Training Session** | **Pedagogy: Self Learning** |
| **22.9.2016** | **TSET OF SIGNIFICANCE (SG)** • Terminology • Need of tests • Z tests • T tests • One Way Anova | **ACTIVITY HOUR (TDR)** Performing Tests of Significance on live data by the participants and interpretation of results. | **TEST OF SIGNIFICANCE IN SPSS (KKD)** • T tests • One Way Anova (for both primary and secondary data) | **NON-PARAMETRIC TESTS I (KKD)** Need Mann-Whitney U Test Wilcoxon signed rank test, K-S Test Chi-square test etc |
| | **Pedagogy: Lecture** | **Pedagogy: SPSS Training Session** | **Pedagogy: Self Learning** | **Pedagogy: Lecture and SPSS Training Session** |
| **23.9.2016** | **NON-PARAMETRIC TESTS II (KKD)** ANOVA test based on ranks both one-way and two-way | **ACTIVITY HOUR** Performing Non-parametric Tests of Significance on live data by the participants and interpretation of results. **(JG)** | **MULTIPLE REGRESSION (DM)** • Formulation • Assumptions and Testing • Interpretation of regression equation • Use of dummy variables | **ACTIVITY HOUR** Performing regression on data by the participants and interpretation of results. **(JG)** |
| | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Self Learning** | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Self Learning** |
| **24.9.2016** | **SCALING (DJB) TECHNIQUES** • Overview of scales and its types • Validity and reliability of scales | **MULTIVARIATE ANALYSIS I (DM)** Overview of multivariate data Introduction to Factor analysis it in SPSS | **MULTIVARIATE ANALYSIS II (DM)** Cluster analysis and Performing it in SPSS | **ACTIVITY HOUR (TDR)** Performing Factor Analysis and Cluster Analysis on live data by the participants and interpretation of results |
| | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Self Learning** |

DCN: Prof. Dilip Nath AP: Dr. Arvind Pandey SG: Dr. Sankaer Goswami KKD: Prof. Kishore Das DM: Prof. Diganta Mukharjee TDR: Dr Tanusree Deb Roy JG: Dr. Jonali Gogoi DJB: D Bhattachariee HS: Dr. Hemanta Saikia

| TENTATIVE PROGRAMME SCHEDULE | | | | |
|---|---|---|---|---|
| | 10am – 11:30am | 11:45am – 1:15pm | 2 pm – 3:30pm | 3:45pm – 5:15 pm |
| **25.9.2016** | **ACTIVITY HOUR** Formulation of a questionnaire by participants which is data entry friendly and coded **(TDR & JG)** | **FIELD VISIT** Visiting respondents with several copies of the questionnaire prepared in the previous hour and collecting data from them. **(TDR & JG)** | | **ACTIVITY HOUR** Entering data collected during the field visit into SPSS and perform data analysis and prepare a report |
| | **Pedagogy: Group Learning** | **Pedagogy: Group Learning** | | **Pedagogy: Group Learning** |
| **26.9.2016** | **MULTIVARIATE ANALYSIS III (HS)** Discriminant analysis and Performing it in SPSS | **QUALITATIVE REGRESSION (HS)** • Formulation • Assumptions • Binomial and Multinomial Regression | **ACTIVITY HOUR (HS)** Performing Binomial Logistic regression on live data by the participants and interpretation of results. | **FEEDBACK AND VALEDICTORY** |
| | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Lecture and SPSS Training Session** | **Pedagogy: Self Learning** | |

In the last day of the workshop feedback was collected from the participants. There were two types of feedback that were collected. One was related to the performance of the Resource Persons of the Training Program on ten parameters that were predetermined by the ICSSR and the other one was related to the Management of the event which was mainly concerning the organizers. Both the feedback were collected in the ICSSR format and was reported back to the funding agency i.e. ICSSR.

**Some glimpses of the workshop are as below:**



*Head of the Department of Statistics, welcoming Honourable Vice Chancellor of Assam University in the Inaugural Session of the Program*

*Group Photo of the participants after the Valedictory Session of the Training Program*

# গবেষণায় পরিসংখ্যানের ব্যবহার নিয়ে কর্মশালা

**যুগশঙ্খ প্রতিবেদন :** পরিসংখ্যানগত গণনা যতই কঠিন বিষয় হোক না কেন, যখন স্ট্যাটিসটিক্যাল প্যাকেজে এই গণনার কাজে হাত দেওয়া হয় তখন তা ততই সহজ হয়ে পড়ে। আর এই সত্য হাতেকলমে প্রমাণ করে দেখাতে আসাম বিশ্ববিদ্যালয়ে সমাজ বিজ্ঞানের গবেষকদের নিয়ে আয়োজিত হল সাতদিনের এক কর্মশালা। বিশ্ববিদ্যালয়ের পরিসংখ্যান বিভাগের উদ্যোগে আয়োজিত এই কর্মশালা শেষ হয়েছে সোমবার।

স্ট্যাটিসটিক্যাল সফটওয়্যার (এসপিএসএস) নিয়ে সাতদিনের এই কর্মশালায় উত্তর পূর্ব সহ বিভিন্ন রাজ্যের মোট ৩০ জন গবেষক অংশ নেন। নয়া দিল্লির ইন্ডিয়ান কাউন্সিল অব সোসাল সায়েন্স রিসার্চ-এর পৃষ্ঠপোষকতায় কর্মশালাটি শুরু হয় গত ২০ সেপ্টেম্বর। বিভাগীয় কনফারেন্স হলে এর আনুষ্ঠানিক উদ্বোধন করেন উপাচার্য অধ্যাপক দিলীপ চন্দ্র নাথ।

গবেষণার ক্ষেত্রে পরিসংখ্যানগত তথ্যের সঠিক ব্যবহার নিয়ে অংশগ্রহণকারীদের হাতেকলমে প্রশিক্ষণ দেন উপাচার্য অধ্যাপক নাথ সহ কলকাতার হ' ন্ডি য. । ন স্ট্যা টি স টি ক্যা ল ই ন স্টি টি উ' টে র অধ্যাপক দিগন্ত মুখার্জি, গৌহাটি বিশ্ববিদ্যালয়ে র অধ্যাপক কিশোর কে দাস, অসম কৃষি বিশ্ববিদ্যালয়ে র বিজ্ঞানী ড. হেমন্ত শইকিয়া, মিজোরাম বিশ্ববিদ্যালয়ের ড. অরবিন্দ পাণ্ডে, শিলচর গুরুচরণ কলেজের ড. শংকর গোস্বামী, আসাম বিশ্ববিদ্যালয়ে র পরিসংখ্যান বিভাগের প্রধান অধ্যাপক দিব্যজ্যোতি ভট্টাচার্য, ড. তনুশ্রী দেবরায়, ড. জোনালি গগৈ প্রমুখ।

সোমবার সমাপ্তি অনুষ্ঠানে বিভাগীয় প্রধান অধ্যাপক দিব্যজ্যোতি ভট্টাচার্য সাতদিনের এই



*আসাম বিশ্ববিদ্যালয়ের পরিসংখ্যান বিভাগের উদ্যোগে আয়োজিত কর্মশালায় বক্তব্য রাখছেন অধ্যাপক দিব্যজ্যোতি ভট্টাচার্য। পাশে উপাচার্য সহ অন্য বিশিষ্ট ব্যক্তিরা। ছবি : নিজস্ব।*

কর্মশালাটি সফল হওয়ায় সন্তোষ ব্যক্ত করে আগামীতেও এতদঞ্চলের গবেষকদের সার্বিক উন্নয়নে এ ধরনের কর্মশালা আয়োজনের ইচ্ছে প্রকাশ করেন।

A *local Newspaper reports about the training program*

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