

**INTERNATIONAL Level**  
**Faculty Development Programme**

On

**Research Methods and Data Analysis Using SPSS**  
(DECEMBER 18-22, 2017)

**Venue:** Seminar Hall, JIMS Engineering Management Technical Campus,  
Greater Noida

**Attendees Included:**

- Academicians
- Research Scholars
- Practitioners working in any functional area interested in research



**JIMS Engineering Management Technical Campus**

(Affiliated to Guru Gobind Singh Indraprastha University, New Delhi, India)



*International Level*

**Faculty Development Programme (FDP)**

On

**"Research Methods and Data Analysis Using SPSS"**

**18th to 22nd December, 2017**



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## **Introduction**

This workshop focused on the procedure to do quality research. As a researcher it is mandatory for one to know the basics and have a core idea in order to satisfy the purpose of research and establish an acceptable conclusion.

JIMS has given this opportunity to the academicians to enhance their researching skills and understand the methodologies. The FDP summarised the aspects relating to the literature review, framing objectives, collection of data, analysing it and finally framing it into a research paper or proposal. This FDP intended to orient participants towards developing their own research plans with due attention at every stage of research.

## **Objectives**

The major objectives kept in mind while framing this Faculty Development Programme were as follows:

- To understand what research is?
- How to do review of literature?
- To make participants familiar with techniques for different research approaches.

- To understand the application of right tools and techniques while conducting a research.
- To understand the use of SPSS in data analysis.
- Enhance the Analytical Skills.
- Facilitate researchers in writing research work

The programme was attended by 43 participants out of whom 16 were external participants (all over India & across) & 23 internal faculties from various departments of all the campuses of JIMS. Attendees included Research Scholars & Academicians from varied backgrounds. While designing the structure of the programme it was kept in mind that there are going to be people from different background that's why emphasis was given on research methodology as a whole not pertaining to one single field so that maximum can be benefitted out of it. 2 high tea (Morning & Evening) and Lunch was provided to participants daily and one kit was issued to each participant at the time of the registration.

Dr. R. K. Raghuwanshi, Director, JEMTEC welcomed all the national & international guests, followed by felicitation of Prof. Prabhat Mittal from QTanalytics, who needs no recognition, under whose guidance FDP on "Research Methods and Data Analysis Using SPSS" was conducted.



## Day 1- 18<sup>th</sup> December 2017

### Pre- Lunch Sessions

9.30 AM- 11.00 AM

**Resource Person- Dr.Archana Rathore, Assistant Professor, Applied Science, JEMTEC**



Dr.Rathore suggested to take research as a mental road map that must answer these four basic questions:

- What is the research problem?
- Why is this topic important to investigate?
- What is known about this topic before the study?
- How will this study advance new knowledge or new ways of understanding?

The researcher must:

1) ensure that he/ she summarize prior studies about the topic in a manner that lays a foundation for understanding the research problem; 2) explain how your study specifically addresses gaps in the literature, insufficient consideration of the topic, or other deficiency in the literature; and, 3) note the broader theoretical, empirical, and/or policy contributions and implications of your research.

Apart from this she talked about ways of selecting a topic, various research approaches and processes. She gave a good start to the FDP.



**11.30 AM- 1.00 PM**

**Resource Person- Mr.Nafees Uddin, Assistant Professor, Applied Science, JEMTEC**



Mr.Nafees Uddin is one the dynamic personalities of JEMTEC, he started with Research Design, the next important step in a research process in which the selection of design in research is the most important task which builds a base for the whole research. He began the session in high note with general terminologies, concepts & features. He focused on types of research design. He referred it as the overall strategy that the researcher choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring it will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. Research problem determines the type of design that a researcher should use. He discussed the importance of literature review as well.

He handled the queries in a smart manner and answered them well.

## Post- Lunch Sessions

1.45 PM- 3.15 PM

Resource Person- Mr.Nafees Uddin, Assistant Professor, Applied Science, JEMTEC



In this session he talked about data collection & sampling techniques. He quoted that data collection is the most important step in the research process, he discussed various methods of data collection in detail. Further he provided the insights of sampling, its processes & categories. Characteristics of the research process first element being data collection which must be accurate enough to draw a reasonable and precise conclusion. The second element of research process as stated by him is the data analysis and then finally compiling the work. He specifically mentioned the four basic things of which the research design will comprise off. They are: the problem (question) the objective the research methodology and the references. These are the elementary necessities to be present in a proper format for a research paper/ project.

He in furtherance of this explained the whole process of making a questionnaire what are the things one needs to keep in mind before forming the questionnaire i.e. the research objective. Then the next he stated was formation of research hypothesis will include various presumptions which have to be tested thoroughly the sample size to be appropriate and the sample group has to be checked as per the researcher needs. After all these preparations he said one needs to carry out pilot study i.e. checking of the research question with the opinions of the experts and the required improvisation should be done if necessary.

**3.30 PM- 5.00 PM**

**Resource Person- Dr. Ria Nanda, Assistant Professor, Applied Science, JEMTEC**



Dr. Nanda conducted the last session of the day in which she discussed how to write research proposals, need of writing such proposals was also discussed.

A well-written introduction is important because, quite simply, one never gets a second chance to make a good first impression. The opening paragraphs of paper/ proposal provides readers with their initial impressions about the logic of the argument, writing style, the overall quality of research, and, ultimately, the validity of the findings and conclusions. A vague, disorganized, or error-filled introduction will create a negative impression, whereas, a concise, engaging, and well-written introduction will lead your readers to think highly of your analytical skills, writing style and research approach. She talked about the components of a research proposal in detail and the various funding agencies. Hand outs were distributed.

She concluded the session with a positive note.

## Day 2- 19<sup>th</sup> December 2017

### Pre- Lunch Sessions

9.30 AM- 11.00 AM

11.30 AM- 1.00 PM

Resource Person- Dr. Prabhat Mittal, University of Delhi



As the base was built on the first day, Dr. Mittal started the session on a high note, all the participants were full of enthusiasm & zeal to learn. He introduced the SPSS system to the academicians popularly known as the Statistical Product for Software Solution which includes data editing output viewing and syntax editing as well as the script window. He explained the whole concept even with the practical point of view stating that the system has two views in it, one the data view wherein we feed in the data and second the variable view wherein we see the components of the questionnaire. He helped participants in defining variables, cases, handling missing data and other basic operations of SPSS like Descriptive Analysis.



## **Post- Lunch Sessions**

**1.45 PM- 3.15 PM**

**3.30 PM- 5.00 PM**

**Resource Person- Dr. Prabhat Mittal, University of Delhi**



Case Study was given and discussed which helped the participants to equip themselves to start working on SPSS. An important concept of plotting charts was discussed, to see the practical outcome of the discussions so far held, all the participants were then taken to computer labs wherein he showed them how to handle SPSS. He showed the importance and usage of the software in the research process. An assignment was given to all the participants which they all were supposed to upload on the website of QTanalytics till midnight to evaluate their skills so obtained from the FDP.

## Day 3- 20<sup>th</sup> December 2017

### Pre- Lunch Sessions

9.30 AM- 11.00 AM

11.30 AM- 1.00 PM

**Resource Person- Dr. Prabhat Mittal, University of Delhi**



Professor Mittal began the session in a happy note as all the participants did their assignment well. This session he took all the participants towards the more technical aspects of research using SPSS. He profoundly explained several data editing tests required for uni-variate bi-variate and multi-variate data. He emphasised on the checking of sample as it should be the actual representative of the data. The uni-variate data has one variable and thus it requires the z-test and t-test. Bi-variate data has two variables and thus it requires independent t-test for both chi-square test and one way ANOVA. It also requires check through correlation and regression.

## Post- Lunch Sessions

1.45 PM- 3.15 PM

3.30 PM- 5.00 PM

Resource Person- Dr. Prabhat Mittal, University of Delhi



In this session he took the testing of Hypothesis I and solved various queries all the participants had. He provided study material and another case to be solved in the lab session.

All the participants were divided into groups of 4 members each comprising minimum of one external guest and one internal faculty to perform various activities in the computer lab.

Practice session was a lively experience as the participants filled their questionnaires and exchanged the data to solve the case, all the participants worked on their own hypothesis. Case was so designed by Dr. Mittal that it helped all the participants to raise various queries and get them solved in his presence. This was a highly learning experience for all the candidates. Another Assignment was given to all the participants.

## **Day 4- 21st December 2017**

### **Pre- Lunch Sessions**

**9.30 AM- 11.00 AM**

**11.30 AM- 1.00 PM**

**Resource Person- Dr. Prabhat Mittal, University of Delhi**



Gradually as the life becomes complex so is one's research, so to overcome the complexities Multi-variate data analysis was discussed which requires one way ANOVA, two way ANOVA MANCOVA and MANOVA. Testing of Hypothesis II and factor analysis were the main topics discussed in this session. He solve the doubts of the participants with great zeal, his energy level encouraged all the participants to be active.



## Post- Lunch Sessions

1.45 PM- 3.15 PM

3.30 PM- 5.00 PM

Resource Person- Dr.Prabhat Mittal, University of Delhi



He conducted this session to light a lamp of knowledge in every brain, wherein he discussed the various topics with the participants for their future research. Showed them the correct path to collect data from authentic and reliable sources and applying correct tool on the data, writing reports at an international levels. He also suggested ways to avoid plagiarism. He also took a brief session to solve the problems of researchers which they faced in their existing or running projects.

In the lab session he showed them how to conduct various tests. He covered the independent t-test, paired t-test, chi-square test, one sample t-test, Kolmogorov – Smirnov test also known as Z-test Mannwhitery-U test, Wilcoxon test Friedman Test, ANOVA test K-sample test, Correlation and regression which are the non-parametric tests used in the cases when the data is not normally distributed. Another assignment was given to all the participants which was supposed to submitted till 22<sup>nd</sup> December.

Day 2, 3, and 4 were the most exciting and practical learning days for the participants as they practised the SPSS on the systems themselves under the guidance of Dr.Prabhat Mittal.

Dr. R. K. Raghuwanshi, Director, JEMTEC extended a warm Vote of Thanks to Dr.Prabhat Mittal. He was felicitated with a memento as token of love and respect.

**Day 5- 22<sup>nd</sup> December 2017**

**Pre- Lunch Sessions- Group Presentations**

**9.30 AM- 11.00 AM**

**11.30 AM- 1.00 PM**

**Moderator: Dr. Rashi Gupta, Assistant Professor, Management, JEMTEC**

**Mr. Vikram Kumar Sharma, Assistant Professor, Management, JEMTEC**



As the instructions of Prof. Mittal, all the participants were divided into groups, each group prepared their own research proposal. To evaluate the presentations on various parameters, Dr.Devendra Jha, Dean- Academics, JEMTEC &Dr. Ruchi Agarwal, HoD, BCA, JEMTEC were available. Dr.Jha praised all the participants for their active participation.

## Post- Lunch Sessions- Valedictory Function

1.45 PM- 3.15 PM

3.30 PM- 5.00 PM

**Moderator: Dr.Shikha Jalota, Associate Professor, Management, JEMTEC**

**Ms. Swati Sharma, Assistant Professor, Management, JEMTEC**



On fifth day post lunch certificates were distributed to the participants. Dr. R. K. Raghuwanshi, Director, Dr.Arun Kumar Chaturvedi, Dean- BBA/ BCA, Dr.Arun Kumar Singh, HoD, BBA, Dr.Devendra Jha, Dean- Academics, &Dr.Ruchi Agarwal, HoD, BCA, JEMTEC honoured the participants with the certificates. Co- Conveners Dr.Shikha Jalota, Associate Professor, BBA, Dr.Rashi Gupta Assistant Professor, BBA and Organising Committee members- Dr. Kumar Ashutosh, Mr.Vikram Kumar Sharma, Ms. Swati Sharma, Mr.Mayank Pandey were given certificate of Appreciation. Vote of thanks to all national & international participants was delivered by Dr. R. K. Raghuwanshi, he encouraged them to conduct quality research in association with other. Finally participants were asked to come on the stage and share their experience and learning of the whole program. The program was concluded with happy note from everyone.





## Media Coverage of FDP

News Paper: Deshbandhu

Date : 19/12/2017

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### अंतरराष्ट्रीय शिक्षक विकास कार्यक्रम में शोध की परिकल्पना पर हुई चर्चा



ग्रेटर नोएडा, 18 दिसम्बर (देशबन्धु)। जेआईएमएस परिसर में क्यू टी एनालिटिक्स दिल्ली के साथ मिलकर पांच दिवसीय अंतरराष्ट्रीय स्तर के शिक्षक विकास कार्यक्रम का शुभारंभ किया गया, जिसका विषय अनुसंधान विधियाँ और एसपीएसएस के उपयोग से डेटा

विश्लेषण है। यह शिक्षक विकास कार्यक्रम 22 दिसम्बर तक चलेगा। भारत के विभिन्न हिस्सों सहित बहरीन और नेपाल के 35 से अधिक शिक्षक भाग ले रहे हैं। कार्यक्रम के पहले दिन प्रतिभागियों को अनुसंधान संबंधी समस्याओं को परिभाषित करने और उन्हें उचित शोध डिजाइन का चयन करने के लिए निर्देशित करने में सक्षम बनाया गया। शोध की प्रकृति के आधार पर परिकल्पना के परीक्षण और औचित्य को समझने के लिए अगले कुछ दिनों में डेटा विश्लेषण के लिए सांख्यिकीय सॉफ्टवेयर पैकेज का प्रशिक्षण दिया जाएगा। इसका उद्देश्य मुख्य प्रतिभागियों को गुणवत्ता रिपोर्ट और शोध प्रस्तावों के लेखन के बारे में सक्षम बनाना है। कार्यक्रम के प्रारम्भ में डॉ. आर.के. रघुवंशी, कैंपस डायरेक्टर ने सभी राष्ट्रीय और अंतरराष्ट्रीय अतिथियों का स्वागत किया, जिसके बाद क्यू टी एनालिटिक्स दिल्ली स्थापक प्रो. प्रभात मित्तल जिनके मार्गदर्शन में यह एफडीपी आयोजित की।

# अनुसंधान पर पांच दिवसीय कार्यशाला का आयोजन



ग्रेनो के जेआइएमएस में आयोजित सेमिनार में भाग लेते वक्ता • जागरण

जासं, ग्रेटर नोएडा : नॉलेज पार्क स्थित जेआइएमएस कॉलेज में पांच दिवसीय अंतर्राष्ट्रीय फैकल्टी विकास कार्यक्रम का आयोजन किया गया। कार्यक्रम का विषय अनुसंधान विधियां व डेटा विश्लेषण है। कार्यक्रम में देश के विभिन्न हिस्सों के साथ ही विदेशी फैकल्टी भी हिस्सा ले रहे हैं। कार्यक्रम के पहले दिन प्रतिभागियों को अनुसंधान संबंधी समस्याओं को परिभाषित करने और उन्हें उचित शोध का चयन करने की जानकारी दी गई।

कार्यक्रम के दौरान शोध की प्रकृति के आधार पर डेटा विश्लेषण के लिए सांख्यिकीय सॉफ्टवेयर पैकेज का प्रशिक्षण दिया जाएगा। कार्यक्रम

का उद्देश्य गुणवत्ता रिपोर्ट और शोध प्रस्तावों के विषय में सक्षम बनाना है। इस अवसर पर कॉलेज के चेयरमैन डा. अमित गुप्ता ने कहा विभिन्न क्षेत्रों में शोध कार्य होना बहुत आवश्यक है। शोध कार्य कॉलेज की रीढ़ की हड्डी की तरह होते हैं। जिससे विद्यार्थियों के साथ ही अध्यापकों को भी फायदा होता है। इस अवसर पर डायरेक्टर आरके रघुवंशी, डा. अरूण कुमार चतुर्वेदी, डा. अरूण कुमार सिंह, डा. शिखा जलोटा, डा. राशी गुप्ता, डा. कुमार आशुतोष, विक्रम कुमार शर्मा, स्वाती शर्मा, मयंक पांडेय, डा. अर्चना राठौर, नफीस उद्दीन, डा. रिया नंदा सहित अन्य लोग मौजूद थे।

## **Following are the media links:**

- <http://ncrlivenews.com/archives/778>
- <http://tennews.in/international-level-faculty-development-programme-at-jims-engineering-management-technical-campus-greater-noida/>
- <http://ncrlivenews.com/archives/820>
- <https://www.facebook.com/officialgrenonews/posts/880869782091791>
- <https://twitter.com/GRENONEWS/status/944169608860262400>
- <http://ncrlivenews.com/archives/846>
- <https://goo.gl/P8XBkU>