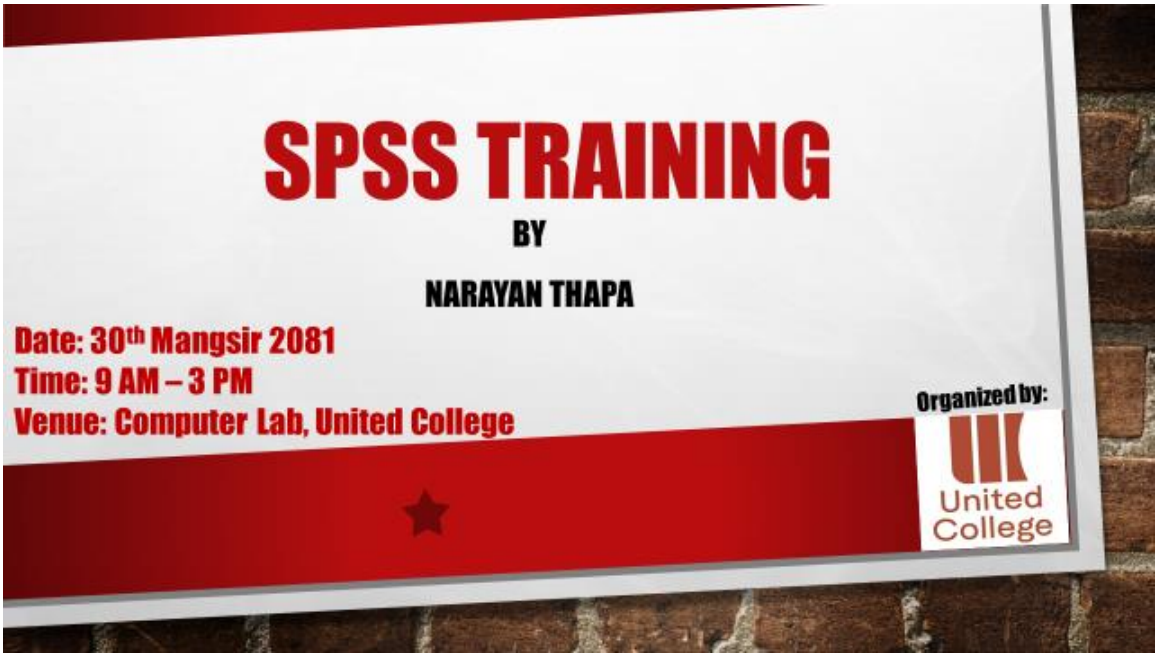
United College

SPSS Training Report



Prepared by
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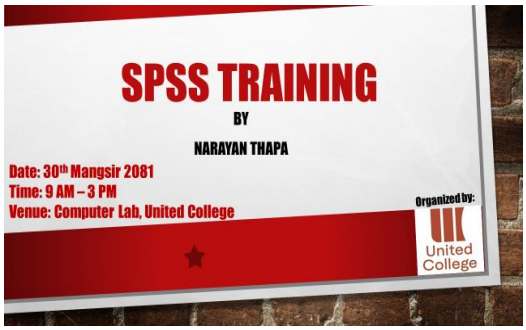
Executive summary

Title	SPSS Training
Date	30th Mangsir 2081
Time	9 AM – 3 PM
Venue	Computer Laab, United College
Resource person	Mr. Narayan Thapa Statistician and SPSS expert
Participants	Faculty of United College
No. of Participants	21
Organizer	United College Kumaripati, Lalitpur

Overview



In the rapidly evolving field of education, there is an increasing demand for faculty members to incorporate data analysis techniques into their teaching and research activities. With the growing emphasis on evidence-based decision-making and data-driven insights, educators must be equipped with the necessary skills to analyze and interpret data effectively. At United College, Kumaripati, Lalitpur, the leadership recognized this evolving need and acknowledged the pivotal role that statistical analysis plays in academic research across various disciplines. As part of their commitment to enhancing the academic capabilities of their faculty, the college identified SPSS (Statistical Package for the Social Sciences) as a key tool that could facilitate more effective research and teaching. Understanding the importance of providing faculty with these essential skills, the College decided to conduct a specialized training session aimed at equipping faculty members with the knowledge and tools required to use SPSS effectively. The main goal of the training was to empower faculty members with the practical skills needed to integrate SPSS into their research and teaching methodologies, thus improving their ability to conduct meaningful data analysis and support evidence-based learning for students. By offering this training, the college sought to enhance its faculty's research capabilities, enabling them to undertake more rigorous and data-driven academic projects. This initiative was in line with the college's broader objective of fostering a culture of continuous professional development and ensuring that its faculty remains at the forefront of academic research and teaching in an increasingly data-driven academic landscape.

Objectives

The key objectives of the SPSS training were:

- To familiarize faculty with the SPSS interface and basic functions.
- To enable data manipulation, cleaning, and transformation skills.
- To teach descriptive and inferential statistics.
- To demonstrate data visualization techniques using SPSS.
- To guide faculty in generating and interpreting SPSS output for research.

Methodology

- **Training approach:** The training was conducted in-person, allowing for direct interaction between the instructor and participants. This format facilitated a more engaging and hands-on experience, with opportunities for faculty members to ask questions, clarify doubts, and work on exercises in real-time. The instructor used a

step-by-step approach to walk participants through various SPSS functionalities, ensuring that everyone could follow along at their own pace.

- **Trainer(s) profile:** The training was conducted by Mr. Narayan Thapa, a seasoned SPSS trainer with over 10 years of experience. He holds a background in data statistical analysis and has provided SPSS training for various academic institutions and organizations. His practical knowledge and teaching style were highly appreciated by the participants, as he made complex concepts easy to understand and applied them to real-life scenarios.

- **Participants:** The training session was specifically designed for the 21 faculty members of United College, particularly those teaching in Bachelor's and Master's level programs. The participants came from diverse academic backgrounds, including business, social sciences, and computer applications.

- **Training venue:** The training was held in the computer lab at United College. The venue provided a conducive environment for hands-on practice, with enough computers equipped with SPSS software for all participants. The setting allowed for easy communication between the instructor and attendees and ensured that everyone had access to the necessary resources to follow along with the training activities.

- **Date and time:** The SPSS training took place on the 30th of Mangsir 2081 (December 15, 2024), from 9:00 AM to 3:00 PM. The six-hour session was structured to ensure that participants had ample time to engage with both introductory and advanced SPSS features, with breaks scheduled to maintain focus and energy levels throughout the day.

- **Training duration:** The training lasted for one full day (six hours), with a mix of lectures, demonstrations, hands-on practice, and Q&A sessions. The first half of the day focused on introducing SPSS and covering basic features, while the afternoon session delved into more advanced topics and data analysis techniques.

- **Materials and resources:** Participants had access to the following resources during the training:
  - ✓ **Computers with SPSS installed**: Each participant had access to a computer with SPSS software installed, allowing them to follow along with the trainer.
  - ✓ **Presentation slides:** The instructor used detailed presentation slides to explain concepts, which were later shared with participants for reference.
  - ✓ **Handouts:** Printed materials summarizing key points, functions, and statistical methods were distributed for further study.
  - ✓ **Datasets:** Real-life datasets were provided for practice, allowing participants to apply the techniques discussed during the session.

- **Budget:** The total budget for the training session was Rs. 20,000 which covered all aspects of the training, including venue arrangements, trainer fees, materials, and other logistical requirements. The cost was a worthwhile investment, given the significant impact the training had on faculty members' research and teaching capabilities.

Training session

Time	Topic	Activities
9:00 AM - 9:30 AM	**Inauguration ceremony**	▪ Welcome address by the Principal, ▪ Opening remarks by the Graduate Program Director ▪ Overview of the training ▪ Introduction to the session objectives and expected outcomes
9:30 AM - 10:30 AM	**Introduction to SPSS**	▪ Familiarization with SPSS Interface ▪ Overview of data view, variable view, and output view ▪ Understanding the menu and toolbars

		▪ Basic SPSS Functions ▪ Importing data from various file formats (Excel, CSV, etc.) ▪ Overview of variable types and their settings (nominal, ordinal, scale) ▪ Basic data entry, sorting, and recoding
10:30 AM – 11:30 AM	**Data manipulation and cleaning**	▪ Performing data cleaning tasks ▪ Identifying and handling missing data ▪ Recoding and transforming variables ▪ Basic data manipulation ▪ Sorting and filtering data ▪ Computing new variables
11:30 AM – 12:30 PM	**Descriptive statistics**	▪ Basic descriptive analysis ▪ Calculating measures of central tendency: mean, median, mode ▪ Generating frequency tables ▪ Creating visualizations: histograms, bar charts, and pie charts ▪ Interpretation of results ▪ Understanding SPSS output and making sense of descriptive statistics
12:30 PM - 1:30 PM: Lunch break (1 hour)		
1:30 PM - 2:30 PM	**Inferential statistics**	▪ Introduction to inferential statistics ▪ Conducting T-tests for comparing group means ▪ Performing ANOVA for multiple group comparisons ▪ Running chi-square tests for categorical data analysis ▪ Correlation and Regression Analysis ▪ Exploring correlation analysis to examine relationships between variables ▪ Basic linear regression analysis for modeling relationships
2:30 PM - 3:00 PM	**Data visualization and report generation**	▪ Creating and customizing graphs and charts ▪ Bar charts, scatter plots, and boxplots ▪ Customizing visuals for clarity and presentation quality

		▪ Generating reports from SPSS output ▪ Exporting results to word or excel ▪ Interpreting SPSS output and preparing professional reports for academic work
3:00 PM	**Closing remarks and distribution of materials**	▪ Summary of key takeaways ▪ Q&A session with the trainer ▪ Distribution of handouts and additional resources ▪ Distributing feedback forms for participants to share their experiences and suggestions for improvement ▪ Closing address by the graduate program director

Training delivery and participant engagement

The training employed various methods to keep participants engaged:

- Throughout the day, participants worked on hands-on exercises using real-life datasets.
- The instructor used examples from research in business and social sciences to demonstrate the relevance of SPSS in faculty members' respective fields.
- Mr. Thapa performed live demonstrations of key SPSS functions, allowing participants to follow along.
- At regular intervals, the instructor held Q&A sessions to address participant queries.
- Participants were encouraged to collaborate in small groups for certain exercises, fostering peer learning.

Evaluation and feedback

Feedback was collected from participants through a post-training survey. The overall response was positive, with participants highlighting the practical, hands-on nature of the session. Many appreciated the instructor's clear and engaging teaching style.

Mr. Narayan Thapa reflected on the success of the training, noting that the hands-on approach allowed participants to grasp key SPSS concepts. However, he acknowledged the need for additional time to cover advanced topics in more detail.

Overall, participants demonstrated a solid understanding of SPSS and were able to apply the concepts learned to real-world datasets. Several faculty members expressed their intention to use SPSS in their upcoming research and courses.

Outcomes and impact

Participants developed proficiency in using SPSS to perform statistical analysis, enabling them to conduct thorough data investigations in their research. They learned to visualize data effectively through charts and graphs, which helped improve their ability to interpret results and draw meaningful conclusions. Additionally, the training enhanced their capacity to generate clear, professional reports, making it easier to present research findings. This combination of skills empowered faculty to apply SPSS more effectively in both teaching and research.

The training significantly improved participants' ability to analyze data, streamlining the research process and making it more efficient. Faculty members, particularly those from fields like business, social sciences, and computer applications, found the SPSS skills directly applicable to their academic work. These newfound abilities allowed them to conduct more robust analyses, improving the quality of their research and teaching. As a result, faculty became better equipped to guide students in data-driven academic endeavors.

Challenges and areas for improvement

Some participants faced challenges in grasping advanced statistical concepts due to limited prior knowledge, which made it harder to fully understand complex analyses. Additionally, navigating large and intricate datasets during exercises posed a challenge for participants, as they struggled to apply the techniques effectively. These difficulties slowed down the learning process for some, highlighting the need for more foundational support and clearer guidance in handling sophisticated data structures within SPSS.

Future sessions could benefit from a more extensive focus on advanced SPSS topics, allowing for a deeper exploration of complex features and techniques. Implementing a pre-training assessment would enable the trainer to tailor the session according to the participants' varying skill levels, ensuring that everyone can follow along at a comfortable pace. Additionally, ensuring that all technical aspects, such as software installation and system readiness, are properly set up in advance would help minimize disruptions and enhance the overall learning experience.

Conclusion

The SPSS training equipped faculty members with essential tools for performing detailed statistical analyses and interpreting data in both research and teaching contexts. By mastering both basic and advanced SPSS techniques, participants gained a deeper understanding of data manipulation, statistical tests, and result interpretation. These enhanced skills will aid in conducting high-quality academic research and improve their

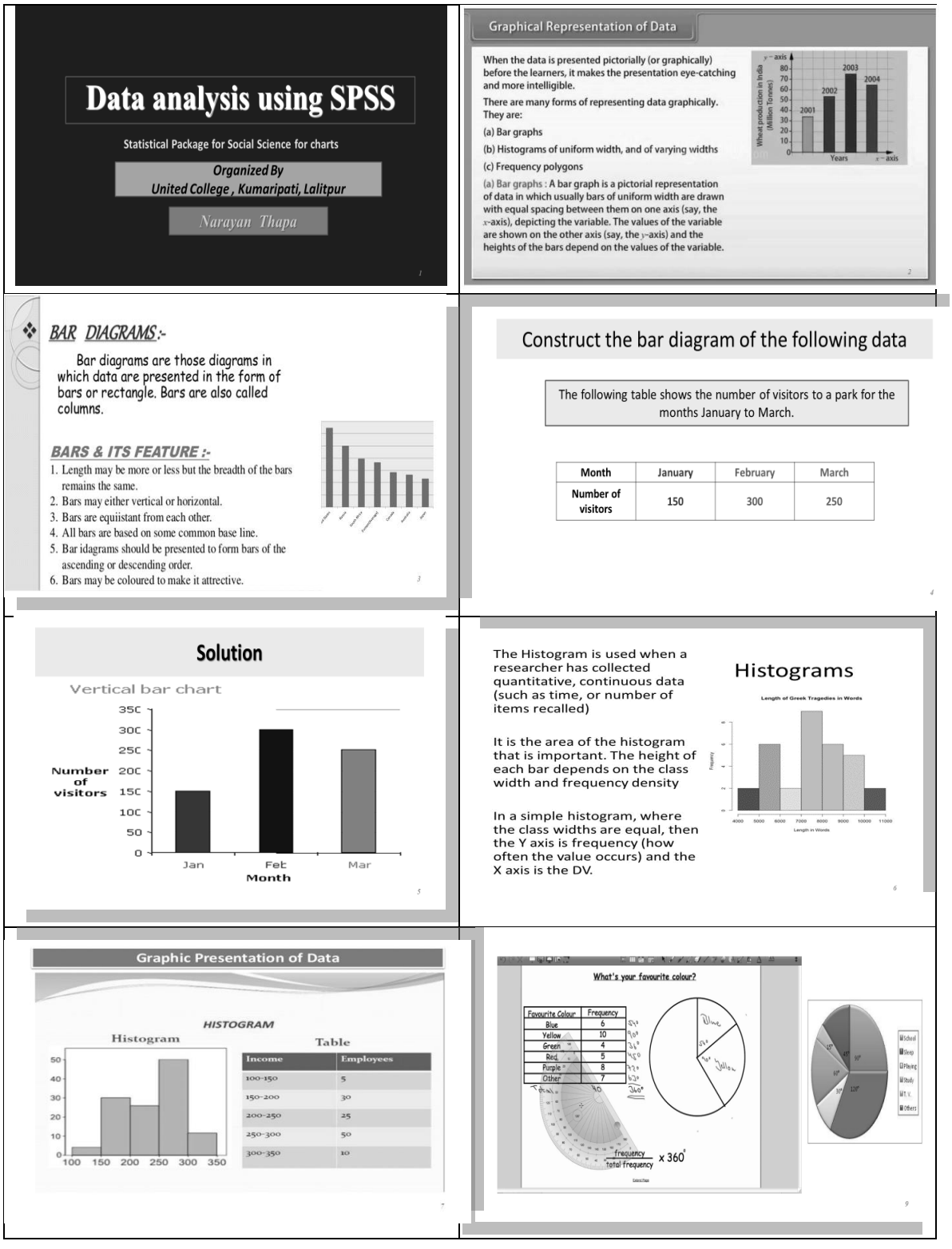
ability to teach statistical methods effectively, thus elevating both personal research and student learning experiences.

The SPSS training session successfully provided faculty with the necessary skills to utilize the software for conducting statistical analyses, improving their research capabilities, and enhancing their teaching of statistical concepts. Faculty members not only learned essential SPSS functionalities but also gained confidence in applying the tool to real-life academic research. The session contributed significantly to their professional development, fostering a more data-driven approach to research and teaching within their respective academic disciplines.

It is recommended that United College offer follow-up sessions for faculty to explore more advanced SPSS techniques in greater depth. These sessions could focus on specialized topics such as multivariate analysis, time series, or advanced regression methods. Additionally, providing extra hands-on practice during future training will help reinforce the skills learned and ensure participants can effectively apply these techniques in their academic work.

Appendices

- **Training materials of SPSS Training – 30th Mangsir 2081**



Data analysis using SPSS

Statistical Package for Social Science for charts

Organized By
United College , Kumaripati, Lalitpur

Narayan Thapa

Graphical Representation of Data

When the data is presented pictorially (or graphically) before the learners, it makes the presentation eye-catching and more intelligible.

There are many forms of representing data graphically. They are:

(a) Bar graphs

(b) Histograms of uniform width, and of varying widths

(c) Frequency polygons

(a) Bar graphs : A bar graph is a pictorial representation of data in which usually bars of uniform width are drawn with equal spacing between them on one axis (say, the x-axis), depicting the variable. The values of the variable are shown on the other axis (say, the y-axis) and the heights of the bars depend on the values of the variable.

Wheat production in India (Million Tonnes)

Years

BAR DIAGRAMS :-

Bar diagrams are those diagrams in which data are presented in the form of bars or rectangle. Bars are also called columns.

BARS & ITS FEATURE :-

1. Length may be more or less but the breadth of the bars remains the same.
2. Bars may either vertical or horizontal.
3. Bars are equiistant from each other.
4. All bars are based on some common base line.
5. Bar idagrams should be presented to form bars of the ascending or descending order.
6. Bars may be coloured to make it attrective.

Construct the bar diagram of the following data

The following table shows the number of visitors to a park for the months January to March.

Month	January	February	March
Number of visitors	150	300	250

Solution

Vertical bar chart

Number of visitors

Month

Jan Feb Mar

The Histogram is used when a researcher has collected quantitative, continuous data (such as time, or number of items recalled)

It is the area of the histogram that is important. The height of each bar depends on the class width and frequency density

In a simple histogram, where the class widths are equal, then the Y axis is frequency (how often the value occurs) and the X axis is the DV.

Histograms

Length of Greek Tragedies in Words

Graphic Presentation of Data

HISTOGRAM

Histogram

Table

Income	Employees
100-150	5
150-200	30
200-250	25
250-300	50
300-350	10

What's your favourite colour?

Favourite Colour	Frequency
Blue	6
Yellow	10
Green	4
Red	5
Purple	8
Other	7

$\frac{\text{frequency}}{\text{total frequency}} \times 360^\circ$

- **List of participants of SPSS Training – 30th Mangsir 2081**

United College
Kumaripati, Lalitpur

SPSS Training Attendance on 30th Mangsir, 2081 (Sunday)

S.N.	Name	Signature	Remarks
1	Dr. Lal Rapacha		
2	Mahesh Aryal Chhetri		
3	Dr. Binod Lingden		
4	Aahamad Rojin Miya		
5	Ashok Pokheral		
6	Bidhya Sharma		
7	Ganesh Joshi		
8	Keshav Ghimire		
9	Umesh Acharya		
10	Rajan Bhandari		
11	Rakesh Kumar Jha		
12	Ram Khadka		
13	Ramesh Pandeya		
14	Rojina Ranjitkar		
15	Shatish K Bhattarai		
16	Shova Nani Shakya		
17	Sunil Chitrakar		
18	Shyam Pd. Bastakoti		
19	Abdul Aziz Miya		
20	Sabitri KC		
21	Sanjaya Subedi		
22	Hem Raj Ojha		
23	Baburaja Tandukar		
24	Sudip Aryal		
25	Alista Subedi		
26	Arun Sedhai		

27	Rabu Ranjit		
28	Richa Pokharel		
29	Sunny Tandukar		
30.	Kamal Adhikari		
31	Maheshwor Dhungana		
32.	Manasvi Bandhura		

- **Feedback forms of SPSS Training – 30th Mangsir 2081**

SPSS Training Feedback Form

Thank you for attending the SPSS training at United College. Your feedback will help us improve future training sessions. Please take a few moments to fill out this form.

Participant information (Optional)

Name: _____

Department/Program: _____ Position: _____

Please rate the following on a scale of 1 (Poor) to 5 (Excellent):

Statement	***1***	***2***	***3***	***4***	***5***
Training contents					
Relevance of content to your teaching/research					
Clarity of explanation for basic SPSS functions					
Usefulness of data manipulation and cleaning techniques					
Clarity of descriptive statistics explanation					
Effectiveness of inferential statistics module (T-tests, ANOVA, etc.)					
Usefulness of data visualization and reporting techniques.					
Trainer evaluation					
Trainer's knowledge and expertise.					
Trainer's ability to explain complex concepts clearly.					
Trainer's responsiveness to questions					
Overall effectiveness of the trainer.					
Training materials					
Usefulness of presentation slides.					
Relevance and usefulness of handouts.					
Quality of datasets provided for practice.					
Overall satisfaction					
Overall satisfaction with the SPSS training session.					
Do you feel more confident using SPSS after the training?					

Additional feedback

What was the most useful aspect of the training?.....

Suggestions for improvement:……

Any other comments?.....

Future Training Needs

What other topics related to SPSS or data analysis would you like future training to cover?.....

Thank you for your valuable feedback!

- **Photos of SPSS Training – 30th Mangsir 2081**

Data analysis using SPSS
Statistical Package for Social Science for charts
Organized By
United College , Kumaripati, Lalitpur
Narayan Thapa
College
(Affiliated To Tribhuvan University)
BCA
BBM
BBS+
BA
MBS