

BIJU PATNAIK UNIVERSITY OF TECHNOLOGY, ODISHA

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**One-Week online Faculty Development Programme on
Research Methodology and Grant writing (RMGW)**

**In association with Association of Indian Universities - Academic and
Administrative Development Centre (AIU-AADC-BPUT)**

One-Week online FDP on Research Methodology & Grant writing
Association with AIU-AADC-BPUT
24th – 28th March 2025



**One-Week Online Faculty Development
Programme**

on

**Research Methodology and Grant Writing
(RMGW)**

Organised by

Biju Patnaik University of Technology, Odisha

In Association with

**Association of Indian Universities- Academic and
Administrative Development Centre (AIU-AADC-BPUT)**

24th – 28th March 2025

Coordinators

Dr. D Chandrasekhar Rao,

Associate Prof., Dept. of CSE, CUPGS, BPUT, Odisha

Dr. Chandrakanta Sahoo,

Associate, Prof., HR, IMIT, Cuttack

From Chief Guest's Desk



Prof. Amiya Kumar Rath
Vice Chancellor,
Biju Patnaik University of Technology, Odisha

MESSAGE

It gives me immense pleasure to be part of the One-Week Online Faculty Development Programme on Research Methodology and Grant Writing, organized by Biju Patnaik University of Technology (BPUT), Odisha, in collaboration with the Association of Indian Universities - Academic and Administrative Development Centre (AIU-AADC-BPUT).

In today's academic ecosystem, research is not merely an activity but a responsibility—one that fuels innovation, addresses real-world challenges, and contributes meaningfully to societal growth. This FDP is a commendable initiative towards strengthening the research culture among faculty and early-career scholars by enhancing their understanding of robust methodologies and effective grant writing.

I am confident that the carefully curated sessions by distinguished experts will offer valuable insights into the nuances of research design, data analysis, proposal drafting, and interdisciplinary collaboration. Such programs not only elevate individual academic pursuits but also significantly contribute to the institutional research profile.

I congratulate the organizers and participants for making this effort possible and urge all attendees to make the most of this opportunity to refine their research skills and explore new avenues of scholarly contribution.

My best wishes for the successful completion of the program and for all your future research endeavors.



Chief Guest
FDP on RMGW

From Guest of Honor's Desk



Dr. Pankaj Mittal,
Secretary General,
Association of Indian Universities

MESSAGE

It is with great pleasure that I extend my greetings to all participants and organizers of the Faculty Development Programme on Research Methodology and Writing for Grants (RMGW). In a knowledge-driven society, the ability to conduct meaningful research and communicate it effectively is not just a professional requirement—it is a fundamental responsibility of the academic community.

This FDP serves as a timely and strategic initiative to sharpen two of the most essential skills in academia: rigorous research design and persuasive grant writing. With global competition intensifying and funding bodies demanding clarity, relevance, and impact, it is imperative that faculty and scholars master the art of crafting proposals that are not only well-researched but also aligned with the priorities of funding agencies.

What distinguishes this programme is its dual emphasis on research quality and research visibility. By integrating methodology with practical writing skills, it enables participants to transform ideas into fundable projects and papers of scholarly merit. I commend the vision behind this effort and the commitment of everyone involved in bringing it to fruition.

Let this FDP be the beginning of a more confident, collaborative, and competitive research culture across institutions. Our future depends on how well we ask questions—and how clearly we present the answers.



**Guest of Honor
FDP on RMGW**

From Guest of Honor's Desk



Mrs. Ranjana Parihar,
Joint Secretary,
Association of Indian Universities

MESSAGE

It is a matter of great honor and satisfaction to be associated with the One-Week Online Faculty Development Programme on Research Methodology and Grant Writing, organized by Biju Patnaik University of Technology (BPUT), Odisha, in collaboration with AIU-AADC-BPUT.

In the rapidly evolving academic landscape, the ability to carry out impactful research and secure funding through well-structured grant proposals has become a vital competency for educators and scholars. This FDP is a thoughtful and timely initiative aimed at equipping faculty members with the knowledge, tools, and confidence to take their research aspirations to the next level.

I commend the organizers for their vision in bringing together a panel of distinguished experts to deliver sessions that cover both foundational concepts and emerging trends. I am particularly pleased to see the emphasis on ethical research practices, interdisciplinary thinking, and the practical aspects of writing and publishing—skills that are essential for sustainable academic growth.

I encourage all participants to engage actively, collaborate meaningfully, and carry forward the learning from this program into their future endeavors. May this initiative spark new ideas, partnerships, and research contributions of lasting value.

Best wishes for a successful and enriching programme.

A handwritten signature in black ink, appearing to read 'R. Parihar', written over a horizontal line.

**Guest of Honor
FDP on RMGW**

From Director Curriculum's Desk



Prof. Sujit Kumar Khuntia,
Director Curriculum Development,
Biju Patnaik University of Technology, Odisha

MESSAGE

It is with great pride and a sense of purpose that I extend my greetings to all participants, speakers, and organizers of the One-Week Online Faculty Development Programme on Research Methodology and Grant Writing, jointly conducted by Biju Patnaik University of Technology (BPUT), Odisha, and the Association of Indian Universities – Academic and Administrative Development Centre (AIU-AADC-BPUT).

The integration of rigorous research practices and effective grant acquisition strategies is essential for advancing institutional excellence and individual academic growth. This FDP addresses a critical need within our academic community—the need to foster a research culture that is methodologically sound, ethically rooted, and strategically aligned with national and global priorities.

At BPUT, the Curriculum Development Cell is committed to nurturing faculty development initiatives that go beyond traditional teaching paradigms. By embedding research-centric skill-building into our broader academic framework, we aim to empower educators to become innovators, mentors, and contributors to the ever-expanding frontiers of knowledge.

I commend the organizing team for curating a comprehensive and interdisciplinary agenda and appreciate the participation of eminent resource persons who have generously shared their expertise. I encourage all faculty members to treat this programme not just as a training event but as a stepping stone toward long-term research impact and collaboration.

Wishing all attendees, a transformative learning experience.

S Khuntia

**Director Curriculum Development
BPUT, Odisha**

From Director I/C CUPGS's Desk



Prof. Sivkumar Mishra,
Director I/C CUPGS
Biju Patnaik University of Technology, Odisha

MESSAGE

Research fuels progress, and the ability to secure funding ensures that groundbreaking ideas reach their full potential. This Faculty Development Programme on Research Methodology and Grant Writing is a powerful step toward cultivating academic excellence through rigorous inquiry and effective resource mobilization.

In today's competitive academic landscape, a strong foundation in research design, data analysis, and grant writing is indispensable. Quality research begins with clarity of purpose, careful planning, and ethical execution. Equally important is the ability to communicate your ideas persuasively and secure support from funding agencies. This program has been thoughtfully designed to provide participants with critical skills and insights that bridge these essential aspects.

I encourage you to put this knowledge into practice, to boldly pursue ambitious projects that address real-world challenges, and to inspire others through your scholarly contributions. Research is not only about answers but also about asking better, deeper questions — let this experience guide you in both. Remember, impactful research can transform communities, shape policies, and drive meaningful change when pursued with dedication and supported with resources. Be fearless in exploring uncharted territories of knowledge, and let your work inspire others to follow suit.

Congratulations to every participant for your commitment to growth, and to the team that made this learning journey possible. May this program ignite your passion for high-quality research and set you on a path to make a lasting difference.

A handwritten signature in black ink that reads "Sivkumar Mishra".

**Director I/C CUPGS
BPUT, Odisha**

From Coordinators' Desk



Dr. Chandrasekhar Rao
Associate Professor,
Dept. of Computer Science and Engineering,
CUPGS, BPUT, Odisha

MESSAGE

It is a moment of great satisfaction and pride to witness the successful organization of the One-Week Online Faculty Development Programme on Research Methodology and Grant Writing, jointly hosted by Biju Patnaik University of Technology (BPUT), Odisha, and the Association of Indian Universities – Academic and Administrative Development Centre (AIU-AADC-BPUT).

The idea behind this FDP was born out of the need to strengthen the research foundation of our academic community and to empower faculty members with the critical skills required to conceptualize, execute, and communicate research effectively. The overwhelming response from participants across disciplines reaffirms our belief in the relevance and necessity of such programs.

Curating this programme has been both a challenging and enriching experience. From identifying pertinent themes and engaging resource persons of high repute, to ensuring meaningful interaction and learning outcomes—every effort has been made to offer participants a platform for academic growth and intellectual exchange.

I express my heartfelt gratitude to all the distinguished speakers for sharing their knowledge, to the organizing team for their tireless efforts, and to every participant for their enthusiastic involvement. I sincerely hope that the insights gained here will translate into impactful research endeavors, successful grant proposals, and long-lasting collaborations.

Wishing you continued success in your academic journey.

D. Chandrasekhar Rao.

**Coordinator RMGW-cum- Secretary
AIU-AADC-BPUT, Odisha**

From Coordinators' Desk



**Dr. Chandrakanta Sahoo,
Associate, Prof., HR
IMIT, Cuttack**

MESSAGE

It has been a privilege to serve as one of the coordinators for the One-Week Online Faculty Development Programme on Research Methodology and Grant Writing, organized by Biju Patnaik University of Technology (BPUT), Odisha, in collaboration with AIU-AADC-BPUT. This initiative reflects our continued commitment to fostering academic excellence and building research competencies among our faculty fraternity.

The design and delivery of this FDP have been guided by a simple yet powerful objective—to bridge the gap between research aspirations and practical execution. Whether it is understanding research methodology, mastering data analysis, or crafting compelling grant proposals, the sessions were thoughtfully curated to cater to both emerging and experienced researchers.

What has truly stood out throughout this journey is the spirit of collaboration—from the enthusiastic engagement of participants to the generous sharing of expertise by our esteemed speakers. Such synergy is what drives institutional progress and lays the groundwork for a vibrant, research-oriented academic environment.

I take this opportunity to thank the university leadership, organizing team, and technical support staff for making this event seamless and successful. I also extend my best wishes to all participants—may the knowledge gained here inspire new research pursuits and meaningful scholarly impact.

A handwritten signature in blue ink that reads "Chandrakanta Sahoo".

**Coordinator
FDP on RMGW**

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OBJECTIVE

The primary objectives of conducting a Faculty Development Program (FDP) on Research Methodology and Grant Writing (RMGW) are:

- **Enhance Research Skills:** To equip faculty members and researchers with advanced knowledge and practical skills in research methodology, enabling them to design, conduct, and analyze research studies effectively.
- **Promote Grant Writing Proficiency:** To provide participants with the tools and techniques required to write compelling grant proposals, increasing their chances of securing funding for research projects.
- **Foster Ethical Research Practices:** To emphasize the importance of ethical considerations in research, ensuring that participants adhere to integrity and transparency in their work.
- **Encourage Interdisciplinary Collaboration:** To facilitate networking and collaboration among researchers from diverse fields, promoting interdisciplinary research initiatives.
- **Boost Research Output:** To enhance the quality and quantity of research output by empowering participants with the knowledge to publish in high-impact journals and present at international conferences.
- **Support Institutional Growth:** To contribute to the overall academic and research growth of institutions by building a pool of skilled researchers and grant writers.

EXPERT MEMBERS

Sl. No.	Name	Designation / Affiliation
1	Dr. Bibhuti Bhusan Mukharjee	Associate Professor, Department of Civil Engineering, CUPGS, BPUT, Rourkela
2	Dr. Suraj Sharma	Associate Professor, Department of Computer Science and Engineering, SoS Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur
3	Dr. Jaya Shankar Singh	Assistant Professor, School of Management, NIT Rourkela
4	Dr. Sanjaya Kumar Panda	Assistant Professor, Department of Computer Science and Engineering, NIT Warangal
5	Dr. Mohan Kumar Kesarla	Scientist A, Instituto de Ciencias Físicas (ICF), UNAM
6	Dr. Bikramaditya Das	Associate Professor, Department of Electronics and Communication Engineering, CUPGS, BPUT, Rourkela
7	Prof. Sarat Kumar Swain	Professor, Department of Chemistry, VSSUT, Burla
8	Dr. Chandrakanta Sahoo	Associate Professor, IMIT, Cuttack
9	Dr. Soumendra Patra	Faculty, MBA Department, Ravenshaw University

SCHEDULE

Day 1: Foundations of Research Methodology (24th March 2025)

Time	Session Title	Speaker/Facilitator
09:00 AM – 09:30 AM	Inauguration & Opening Remarks	Chief Guest / Organizer
09:30 AM – 11:30 AM	Introduction to Research Methodology	Dr. Bibhuti Bhusan Mukharjee
11:30 AM – 11:45 AM	Break	
11:45 AM – 01:45 PM	Conducting an Effective Literature Review	Dr. Suraj Sharma
01:45 PM – 03:00 PM	Lunch Break	
03:00 PM – 05:00 PM	Research Design and Problem Formulation	Dr. Jaya Shankar Singh

Day 2: Data Collection (25th March 2025)

Time	Session Title	Speaker/Facilitator
09:00 AM – 11:00 AM	Quantitative Data Collection	Dr. Jaya Shankar Singh
11:00 AM – 11:30 AM	Break	
11:30 AM – 01:30 PM	Introduction to Quantitative Analysis	Dr. Sanjaya Kumar Panda
01:30 PM – 03:00 PM	Lunch Break	
03:00 PM – 05:00 PM	Secondary Data and Big Data Sources	Dr. Jaya Shankar Singh

Day 3: Writing Research Proposal (26th March 2025)

Time	Session Title	Speaker/Facilitator
09:00 AM – 11:00 AM	Drafting & Evaluating Research Proposals; Grant Writing	Dr. Mohan Kumar Kesarla
11:00 AM – 11:30 AM	Break	
11:30 AM – 01:30 PM	Publishing & Presentation Skills	Dr. Bikramaditya Das

Time	Session Title	Speaker/Facilitator
01:30 PM – 03:00 PM	Lunch Break	
03:00 PM – 05:00 PM	Intellectual Property Rights	Prof. Sarat Kumar Swain

Day 4: Data Analysis (27th March 2025)

Time	Session Title	Speaker/Facilitator
09:00 AM – 11:00 AM	Hypothesis Testing using Parametric Test	Dr. Chandrakanta Sahoo
11:00 AM – 11:30 AM	Break	
11:30 AM – 01:30 PM	Qualitative Analysis (Content/Thematic/NVivo)	Dr. Jaya Shankar Singh
01:30 PM – 03:00 PM	Lunch Break	
03:00 PM – 05:00 PM	Hypothesis Testing using Non-Parametric Test	Dr. Chandrakanta Sahoo

Day 5: Advanced Research Techniques (28th March 2025)

Time	Session Title	Speaker/Facilitator
09:00 AM – 11:00 AM	Interdisciplinary Research Approaches	Dr. Soumendra Patra
11:00 AM – 11:30 AM	Break	
11:30 AM – 01:30 PM	Emerging Research Trends (AI, Blockchain, etc.)	Dr. Sanjaya Kumar Panda
01:30 PM – 03:00 PM	Lunch Break	
03:00 PM – 05:00 PM	Valedictory, & Feedback	

INAUGURAL SESSION

AGENDA

Time	Event	Speaker/Facilitator
9:00 AM	Start of the Inauguration	Introduction of Guests by Dr. Subhendu Kumar Rath, Deputy Registrar, BPUT, Odisha
9:02 – 9:05 AM	BPUT Anthem	--
9:05 – 9:07 AM	Welcome Address	Dr. D. C. Rao, Secretary, AIU-AADC-BPUT
9:07 – 9:10 AM	Address By	Prof. Sivkumar Mishra, Director, CUPGS, BPUT, Odisha
9:10 – 9:13 AM	Address By	Prof. Sujit Kumar Khuntia, Director, Curriculum Development, BPUT, Odisha
9:13 – 9:18 AM	Address by Guest of Honor	Mrs. Ranjana Parihar, Joint Secretary, Association of Indian Universities, New Delhi
9:18 – 9:25 AM	Address by Chief Guest	Prof. Amiya Kumar Rath, Vice Chancellor, BPUT, Odisha
9:25 – 9:30 AM	Vote of Thanks	Smt. Nishi Poonam Minz, OAS (SAG), Registrar, BPUT, Odisha

MINUTES OF THE INAUGURAL SESSION

The inaugural session of the Faculty Development Programme (FDP) on *Research Methodology & Grant Writing*, organized by BPUT Odisha in association with AIU-AADC-BPUT, was held on **24th March 2025**.

1. Commencement

The session commenced at 9:00 AM, with a warm welcome to all dignitaries and participants.

2. Introduction of Guests

Dr. Subhendu Kumar Rath, Deputy Registrar, BPUT, Odisha, introduced the distinguished guests for the event.

3. BPUT Anthem (9:02 – 9:05 AM)

The program began with the soulful rendition of the BPUT Anthem, instilling a sense of pride and unity among attendees.

4. Welcome Address (9:05 – 9:07 AM)

Dr. D. Chandrasekhar Rao, Secretary, AIU-AADC-BPUT, delivered the welcome address, highlighting the objectives of the FDP and the role of AIU-AADC in academic capacity building.

5. Address by Prof. Sivkumar Mishra (9:07 – 9:10 AM)

Prof. Sivkumar Mishra, Director, CUPGS, BPUT, shared insights on the importance of research-oriented training for faculty and the expected outcomes of the FDP.

6. Address by Prof. Sujit Kumar Khuntia (9:10 – 9:13 AM)

Prof. Sujit Kumar Khuntia, Director, Curriculum Development, BPUT, emphasized the integration of research methodology into curriculum development and encouraged active participation from faculty.

7. Address by Guest of Honour (9:13 – 9:18 AM)

Mrs. Ranjana Parihar, Joint Secretary, Association of Indian Universities (AIU), New Delhi, graced the event as the Guest of Honour. She appreciated the initiative and underscored the role of such FDPs in strengthening the research ecosystem in universities.

8. Address by Chief Guest (9:18 – 9:25 AM)

Prof. Amiya Kumar Rath, Vice Chancellor, BPUT, Odisha, delivered the inaugural address as Chief Guest. He stressed the need for skill development in grant writing and research ethics among faculty members, and formally inaugurated the FDP.

9. Vote of Thanks (9:25 – 9:30 AM)

Smt. Nishi Poonam Minz, OAS (SAG), Registrar, BPUT, extended a heartfelt vote of thanks to all dignitaries, participants, and organizers for making the inaugural session a success.

The inaugural session concluded successfully, setting a positive tone for the week-long FDP. The active participation and valuable insights of the dignitaries greatly enriched the opening ceremony.

MINUTES OF THE SESSION

SESSION: 1

Topic: Introduction to Research Methodology

Speaker/Expert: Dr. Bibhuti Bhusan Mukharjee, Associate Professor, Department of Civil Engineering, CUPGS, BPUT, Rourkela

Minutes of the Session:

- The session commenced with a warm welcome and introduction of the expert speaker by the session moderator.
 - The moderator invited Dr. Bibhuti Bhusan Mukharjee to lead the session.
 - Dr. Mukharjee began by defining the term "research" and explaining its academic and scientific significance.
 - He elaborated on the purpose of research, emphasizing its role in knowledge creation, problem-solving, and policy development.
 - The scope of research in engineering, science, and interdisciplinary fields was discussed.
 - The expert distinguished between different types of research, such as qualitative and quantitative.
 - Further, he explained applied vs. basic research with relevant examples from civil engineering and social sciences.
 - Importance of framing proper research questions and objectives was highlighted.
 - The expert discussed how to align research with institutional, societal, and global needs.
 - Ethical aspects in conducting research were briefly introduced.
 - He highlighted common pitfalls in initiating research and how to overcome them.
 - Dr. Mukharjee emphasized the need for curiosity, observation, and logical reasoning as key traits of a researcher.
 - The presentation concluded with a summary of key takeaways and recommended readings for deeper understanding.
 - The session transitioned into an interactive Q&A segment where participants asked domain-specific questions.
 - The moderator expressed gratitude to the expert, summarized key points, and concluded the session.
-

SESSION: 2

Topic: Conducting an Effective Literature Review

Speaker/Expert: Dr. Suraj Sharma, Associate Professor, Department of Computer Science and Engineering, SoS Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur

Minutes of the Session:

- The session began with the moderator introducing Dr. Suraj Sharma and his credentials.
 - The expert was requested to lead the session on literature review methodology.
 - Dr. Sharma started by defining the importance of a systematic literature review in the research process.
 - He introduced major sources of literature, including academic journals, databases, and conference proceedings.
 - Emphasis was placed on using digital libraries such as IEEE, Springer, ScienceDirect, and Google Scholar.
 - The speaker explained how to use reference management tools like Mendeley and Zotero effectively.
 - Techniques for identifying research gaps through review were elaborated.
 - Dr. Sharma explained how to develop research questions and hypotheses based on the literature survey.
 - The difference between systematic, narrative, and meta-analytic reviews was discussed.
 - He demonstrated a step-by-step approach to conducting a review including planning, searching, organizing, and writing.
 - The importance of critically evaluating sources rather than simply summarizing them was emphasized.
 - Dr. Sharma showed examples of well-structured literature reviews from various disciplines.
 - Challenges such as information overload, duplication, and outdated references were addressed.
 - The session concluded with an interactive Q&A segment.
 - The moderator thanked Dr. Sharma for his insights and formally closed the session.
-

SESSION: 3

Topic: Research Design and Problem Formulation

Speaker/Expert: Dr. Jaya Shankar Singh, Assistant Professor, School of Management, NIT Rourkela

Minutes of the Session:

- The session opened with the moderator introducing Dr. Jaya Shankar Singh.
 - Dr. Singh was invited to deliver the session on research design and problem formulation.
 - The session began with the definition of research design and its role in achieving research objectives.
 - Dr. Singh discussed various types of research designs: descriptive, exploratory, and experimental.
 - Examples of how different disciplines use each type of design were provided.
 - He explained the significance of aligning research design with research questions and objectives.
 - Sampling methods were introduced including probability and non-probability sampling.
 - Key data collection techniques like surveys, interviews, and observations were outlined.
 - The importance of validity, reliability, and generalizability in design was discussed.
 - Dr. Singh shared common mistakes in research design and strategies to avoid them.
 - The session also covered ethical issues in research planning.
 - He emphasized the iterative nature of research and the need to revise designs as needed.
 - Participants were given a sample case study for hands-on analysis.
 - The expert answered questions from participants, clarifying design strategies.
 - The session was concluded with a vote of thanks from the moderator.
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SESSION: 4

Topic: Quantitative Data Collection

Speaker/Expert: Dr. Jaya Shankar Singh, Assistant Professor, School of Management, NIT Rourkela

Minutes of the Session:

- The moderator welcomed the participants and introduced Dr. Jaya Shankar Singh.
 - Dr. Singh was requested to lead the session on quantitative data collection.
 - The session started with an explanation of what quantitative data entails.
 - Dr. Singh discussed structured data collection tools including surveys and questionnaires.
 - The difference between open-ended and close-ended questions was explained.
 - He demonstrated how to design effective survey forms using Google Forms and Qualtrics.
 - Dr. Singh also covered the design of structured interviews and their relevance.
 - The session included an overview of data reliability and question standardization.
 - Unstructured methods like focus groups and observational techniques were briefly introduced.
 - The importance of pilot testing questionnaires was emphasized.
 - Ethical considerations in data collection were highlighted.
 - Dr. Singh provided tips for increasing response rates in surveys.
 - Real examples from management and social sciences were shared.
 - The session ended with an interactive Q&A.
 - The moderator delivered the vote of thanks and closed the session.
-

SESSION: 5

Topic: Introduction to Quantitative Analysis

Speaker/Expert: Dr. Sanjaya Kumar Panda, Assistant Professor, Department of Computer Science and Engineering, NIT Warangal

Minutes of the Session:

- The moderator welcomed attendees and introduced Dr. Sanjaya Kumar Panda.
 - Dr. Panda began the session by explaining the role of statistical tools in research.
 - He introduced key software used in quantitative analysis: SPSS, R, and Python.
 - A brief overview of descriptive vs inferential statistics was given.
 - Dr. Panda demonstrated data entry and variable definition in SPSS.
 - He showcased basic statistical tests such as t-tests and chi-square using R.
 - Python-based libraries for data analytics like pandas and seaborn were introduced.
 - He explained how to interpret statistical results for academic writing.
 - The importance of data cleaning and handling missing data was discussed.
 - Dr. Panda emphasized ethical usage of data and correct reporting.
 - Participants were encouraged to choose tools based on their domain.
 - Case studies involving real-world datasets were discussed.
 - Attendees raised questions about statistical assumptions and usage.
 - The session concluded with answers to the Q&A and follow-up resource sharing.
 - The moderator expressed thanks and closed the session.
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SESSION: 6

Topic: Secondary Data and Big Data Sources

Speaker/Expert: Dr. Jaya Shankar Singh, Assistant Professor, School of Management, NIT Rourkela

Minutes of the Session:

- The session began with a welcome and introduction by the moderator.
 - Dr. Singh was invited to conduct the session on secondary data and big data.
 - The session opened with definitions and examples of secondary data sources.
 - Government reports, published studies, and datasets were cited.
 - Dr. Singh discussed the pros and cons of using secondary data.
 - He explained the challenges of data accuracy, relevance, and format.
 - Introduction to big data and its applications in research followed.
 - Tools like Hadoop and Spark were briefly introduced.
 - Dr. Singh explained the importance of metadata and data provenance.
 - He showed how big data can inform decision-making in policy and business.
 - Ethical handling of secondary and big data was highlighted.
 - Participants were guided on accessing open government and institutional databases.
 - Case examples from marketing and social research were demonstrated.
 - Questions were addressed during an active Q&A session.
 - The moderator thanked the expert and closed the session.
-

SESSION: 7

Topic: Drafting & Evaluating Research Proposals; Grant Writing

Speaker/Expert: Dr. Mohan Kumar Kesarla, Scientist A, Instituto de Ciencias Físicas (ICF), UNAM

Minutes of the Session:

- The session began with the moderator introducing Dr. Mohan Kumar Kesarla.
 - Dr. Kesarla was invited to deliver the session on proposal drafting and grant writing.
 - He began by outlining the components of a strong research proposal.
 - Abstract, objectives, and methodology sections were explained in detail.
 - Budget planning and timeline creation were elaborated.
 - Dr. Kesarla emphasized understanding funding agency priorities.
 - Evaluation criteria such as feasibility, novelty, and impact were discussed.
 - He presented real examples of successful and rejected proposals.
 - Common mistakes in grant writing were identified.
 - Tips for writing compelling proposals were shared.
 - Participants were encouraged to tailor proposals per funding body guidelines.
 - The ethical dimension of budget justification was explained.
 - Templates and checklists were shared for proposal planning.
 - Q&A followed with detailed expert responses.
 - The moderator thanked the speaker and concluded the session.
-

SESSION: 8

Topic: Publishing and Presentation Skills

Speaker/Expert: Dr. Bikramaditya Das, Associate Professor, Department of ECE, CUPGS, BPUT, Rourkela

Minutes of the Session:

- The moderator welcomed the participants and introduced Dr. Bikramaditya Das.
 - The expert started the session by explaining the structure of a research paper.
 - Title, abstract, introduction, methodology, and results sections were detailed.
 - He explained how to choose a suitable journal for publication.
 - The peer-review process and responding to reviewers were elaborated.
 - Open access vs subscription journals were compared.
 - Ethical issues like plagiarism, falsification, and authorship were discussed.
 - Dr. Das highlighted research dissemination to non-academic audiences.
 - He shared presentation techniques using visuals and storytelling.
 - Tools for preparing slides and posters were recommended.
 - Common pitfalls in presentations were identified.
 - The importance of rehearsal and audience engagement was stressed.
 - Writing for policymakers and the public was briefly covered.
 - Participant questions were answered during the Q&A.
 - The session ended with a formal vote of thanks.
-

SESSION: 9

Topic: Intellectual Property Rights

Speaker/Expert: Prof. Sarat Kumar Swain, Professor, Department of Chemistry, VSSUT, Burla

Minutes of the Session:

- The moderator initiated the session by introducing Prof. Sarat Kumar Swain.
- The expert started by defining intellectual property (IP) and its categories.
- Patents, copyrights, trademarks, and trade secrets were explained.
- Prof. Swain described the process of filing for patents in India.
- The distinction between product and process patents was elaborated.
- Case laws and real patent examples were shared.
- The session highlighted IP in academic and research institutions.
- Collaborative research and IP ownership were discussed.
- Importance of documentation in IP protection was stressed.
- Prof. Swain addressed questions on patentability criteria.
- The international framework for IPR, including WIPO and TRIPS, was introduced.
- IP challenges in digital content and AI-based research were touched upon.
- Institutional IP policies and tech transfer practices were discussed.
- An engaging Q&A closed the technical interaction.
- The moderator offered thanks and closed the session.

SESSION: 10

Topic: Hypothesis Testing using Parametric Test

Speaker/Expert: Dr. Chandrakanta Sahoo, Associate Professor, IMIT, Cuttack

Minutes of the Session:

- The session was opened by the moderator, who introduced Dr. Chandrakanta Sahoo.
 - Dr. Sahoo began the session by defining hypothesis testing and its significance in research.
 - Parametric tests such as t-test, z-test, and ANOVA were explained in depth.
 - The speaker elaborated on assumptions of parametric tests including normality and homogeneity of variance.
 - Examples of when to use each test were shared.
 - Dr. Sahoo demonstrated hypothesis formulation and testing steps.
 - Importance of selecting the right test based on data type was emphasized.
 - The concept of p-value and confidence intervals was clarified.
 - Software tools used for parametric testing were showcased.
 - He discussed interpreting results for research publication.
 - The speaker highlighted common pitfalls and how to avoid them.
 - Ethical considerations in statistical reporting were mentioned.
 - Participants were guided through a sample dataset analysis.
 - Dr. Sahoo answered participant queries during the Q&A.
 - The session concluded with a vote of thanks by the moderator.
-

SESSION: 11

Topic: Qualitative Analysis using Content Analysis, Thematic Analysis, and NVivo

Speaker/Expert: Dr. Jaya Shankar Singh, Assistant Professor, School of Management, NIT Rourkela

Minutes of the Session:

- The moderator welcomed the speaker and introduced Dr. Jaya Shankar Singh.
 - Dr. Singh started the session by defining qualitative research and its applications.
 - He elaborated on content analysis and how to identify meaningful patterns.
 - Thematic analysis was explained with step-by-step guidance.
 - Dr. Singh introduced NVivo as a powerful tool for qualitative data analysis.
 - Demonstrations of coding, theme generation, and visualization in NVivo were presented.
 - Strategies for ensuring validity and reliability in qualitative studies were discussed.
 - He shared examples of research studies that employed qualitative methods.
 - Ethical concerns in qualitative research, including confidentiality, were addressed.
 - Differences between qualitative and quantitative analysis were highlighted.
 - Guidelines for writing qualitative research results were discussed.
 - Participants engaged in a hands-on exercise using sample data.
 - Dr. Singh answered questions on tool selection and interpretation.
 - He recommended further resources for mastering NVivo.
 - The session ended with a formal vote of thanks from the moderator.
-

SESSION: 12

Topic: Hypothesis Testing using Non-Parametric Test

Speaker/Expert: Dr. Chandrakanta Sahoo, Associate Professor, IMIT, Cuttack

Minutes of the Session:

- The session began with the moderator introducing Dr. Chandrakanta Sahoo.
 - Dr. Sahoo initiated the discussion with a comparison between parametric and non-parametric tests.
 - Key non-parametric tests like Mann-Whitney U, Wilcoxon, Kruskal-Wallis, and Chi-Square were explained.
 - The speaker detailed situations where non-parametric tests are more suitable.
 - Steps for hypothesis formulation and testing were covered.
 - Real-life examples from business and social sciences were shared.
 - The concept of ranking and its role in non-parametric tests was illustrated.
 - Tools for conducting these tests using SPSS and R were shown.
 - Interpretation of non-parametric results for academic reporting was discussed.
 - Dr. Sahoo warned against misuse of tests and overgeneralization.
 - Ethical implications and responsible reporting were emphasized.
 - He responded to participants' specific queries.
 - Exercises using dummy data were provided for practice.
 - Participants appreciated the clarity in explaining complex concepts.
 - The moderator expressed thanks and concluded the session.
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SESSION: 13

Topic: Interdisciplinary Research Approaches

Speaker/Expert: Dr. Soumendra Patra, Faculty, MBA Department, Ravenshaw University

Minutes of the Session:

- The moderator initiated the session with an introduction to Dr. Soumendra Patra.
 - Dr. Patra began by explaining the concept of interdisciplinary research.
 - Importance of collaboration across domains to address complex problems was discussed.
 - Case studies of successful interdisciplinary research projects were presented.
 - Techniques to identify potential cross-disciplinary intersections were shared.
 - Dr. Patra outlined frameworks for initiating interdisciplinary collaborations.
 - Challenges such as terminology gaps, methodological differences, and integration issues were covered.
 - He encouraged participants to network and build multi-disciplinary teams.
 - The speaker emphasized the role of creativity and open-mindedness.
 - Grant opportunities and institutional support for interdisciplinary research were mentioned.
 - Participants brainstormed ideas and shared domain-specific thoughts.
 - Dr. Patra highlighted how interdisciplinary research can lead to higher-impact publications.
 - He answered questions regarding coordination and project management.
 - Best practices and success strategies were offered.
 - The moderator thanked the speaker and concluded the session.
-

SESSION: 14

Topic: Emerging Research Trends

Speaker/Expert: Dr. Sanjaya Kumar Panda, Assistant Professor, Department of Computer Science and Engineering, NIT Warangal

Minutes of the Session:

- The session began with a welcome and introduction by the moderator.
 - Dr. Panda started by outlining current global trends in research and innovation.
 - AI and Machine Learning applications in scientific inquiry were highlighted.
 - He discussed blockchain technology and its role in data integrity and security.
 - Quantum computing, IoT, and cloud-based research were also introduced.
 - Dr. Panda emphasized the importance of staying updated with emerging tools.
 - Cross-domain application of technology in humanities, healthcare, and management was explained.
 - He encouraged participants to explore interdisciplinary integration with emerging tools.
 - Ethical and societal implications of advanced technology were addressed.
 - Tools for automation in literature review, data analysis, and visualization were shared.
 - Future research areas such as sustainable tech and data ethics were discussed.
 - Participants engaged in questions related to AI in their research domains.
 - Dr. Panda shared online platforms and journals for tracking trends.
 - He advised on adapting research methods to evolving technologies.
 - The moderator concluded with a vote of thanks and closed the session.
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VALEDICTORY SESSION

AGENDA

Time	Event	Speaker/Facilitator
04:00 PM	Start of the Valedictory	Introduction of Guests by Dr. Subhendu Kumar Rath, Deputy Registrar, BPUT, Odisha
4:02 – 4:05 PM	BPUT Anthem	--
4:05 – 04:07 PM	Address by Coordinator	Dr. D. Chandrasekhar Rao, Secretary, AIU-AADC-BPUT
4:07 – 4:10 PM	Address By Guest of Honor	Prof. Sivkumar Mishra, Director, CUPGS, BPUT, Odisha
4:10 – 4:13 PM	Address by Chief Guest	Prof. Sujit Kumar Khuntia, Director, Curriculum Development, BPUT, Odisha
4:13 – 4:15 PM	Vote of Thanks	Dr. Subhendu Kumar Rath, Deputy Registrar, BPUT, Odisha

Minutes of the Valedictory Session:

The Valedictory Session of the Faculty Development Programme was held on 28th March 2025. The event commenced at 4:00 PM with the presence of dignitaries, faculty participants, and organizers.

1. Introduction of Guests (4:00 – 4:02 PM)

The session began with a brief introduction of the dignitaries by the host, welcoming all esteemed guests and participants.

2. BPUT Anthem (4:02 – 4:05 PM)

The session proceeded with the BPUT Anthem, observed with solemnity and respect by all attendees.

3. Address by Dr. D. C. Rao (4:05 – 4:07 PM)

Dr. D. Chandrasekhar Rao, Secretary, AIU-AADC-BPUT, addressed the gathering and appreciated the participation and outcomes of the week-long FDP. He emphasized the importance of continuing such academic engagements.

4. Address by Guest of Honor (4:07 – 4:10 PM)

Prof. Sivkumar Mishra, Director I/C, CUPGS, BPUT, Odisha, serving as the Guest of Honor, reflected on the sessions conducted during the FDP and shared insights on fostering research culture in academia.

5. Address by Chief Guest (4:10 – 4:13 PM)

Prof. Sujit Kumar Khuntia, Director, Curriculum Development, BPUT, Odisha, delivered the Chief Guest's Address, highlighting the significance of grant writing skills and research methodologies for faculty development and institutional growth.

6. Vote of Thanks (4:13 – 4:15 PM)

Dr. Subhendu Kumar Rath, Deputy Registrar, BPUT, Odisha, proposed the vote of thanks, expressing gratitude to all the speakers, participants, organizing team, and support staff for their contributions to the successful conduct of the FDP.

The valedictory session concluded on a positive note at 4:15 PM, marking the end of an enriching and productive Faculty Development Programme.

SUMMARY

The one-week Faculty Development Programme (FDP) on *Research Methodology and Grant Writing* was organized with the intent to enhance research competencies among faculty members across disciplines. The programme aimed to provide a comprehensive understanding of research methodologies, tools for effective grant writing, and exposure to current research trends.

Key Objectives:

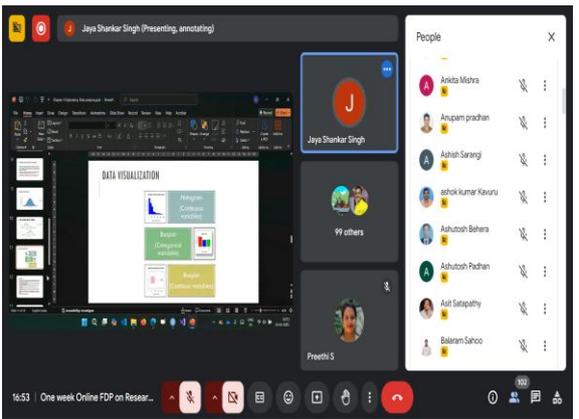
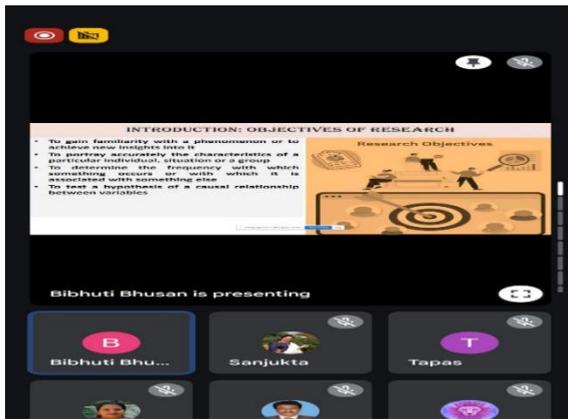
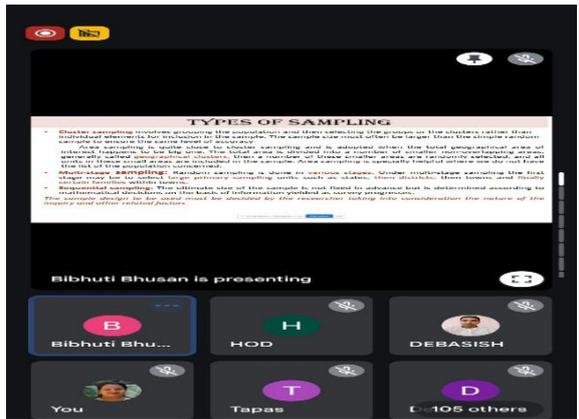
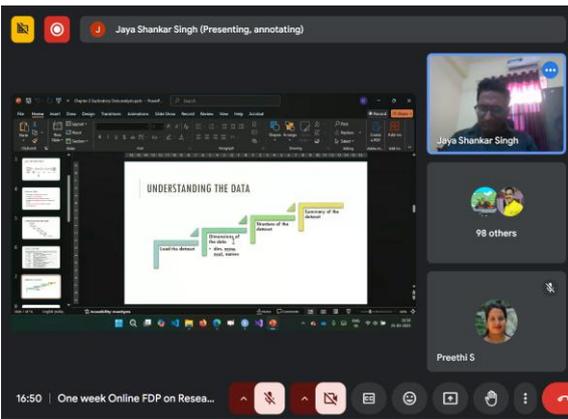
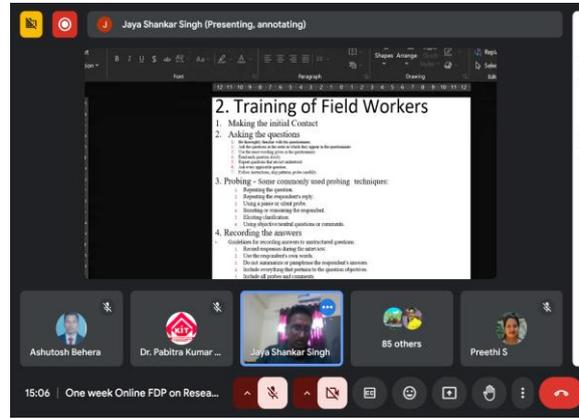
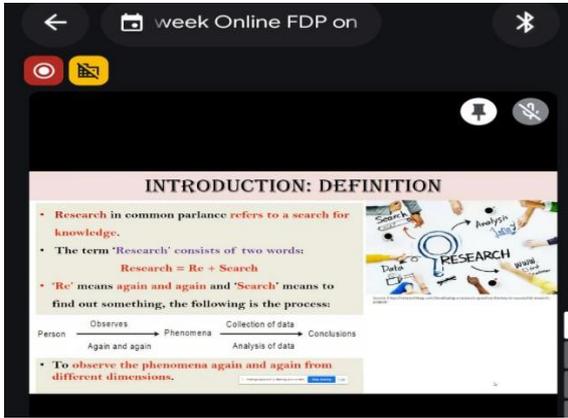
- To strengthen participants' foundational and practical knowledge in research methodology.
- To enhance proposal writing and grant application skills.
- To promote ethical and impactful research practices.
- To foster interdisciplinary research collaboration.
- To familiarize faculty with data analysis tools and software.
- To improve academic publishing and presentation skills.

Programme Highlights:

- A total of **14 technical sessions** were conducted over five days.
- Sessions covered a wide range of topics including research design, literature review, data collection, statistical analysis, qualitative techniques, grant writing, intellectual property rights, and emerging research trends.
- Sessions were led by **nine eminent experts** from reputed institutions across India and abroad.
- **A total of 248 faculty participants** registered for the FDP from various engineering, management, and science colleges across the country.
- Each session began with an introduction by a moderator and ended with a vote of thanks after an engaging Q&A segment.
- A **mandatory quiz** was conducted at the end of the programme to assess participant learning and engagement.
- **Feedback was collected** from all participants to evaluate the quality, relevance, and delivery of the sessions.
- E-certificates were issued to all participants who successfully completed the FDP and the final assessment.

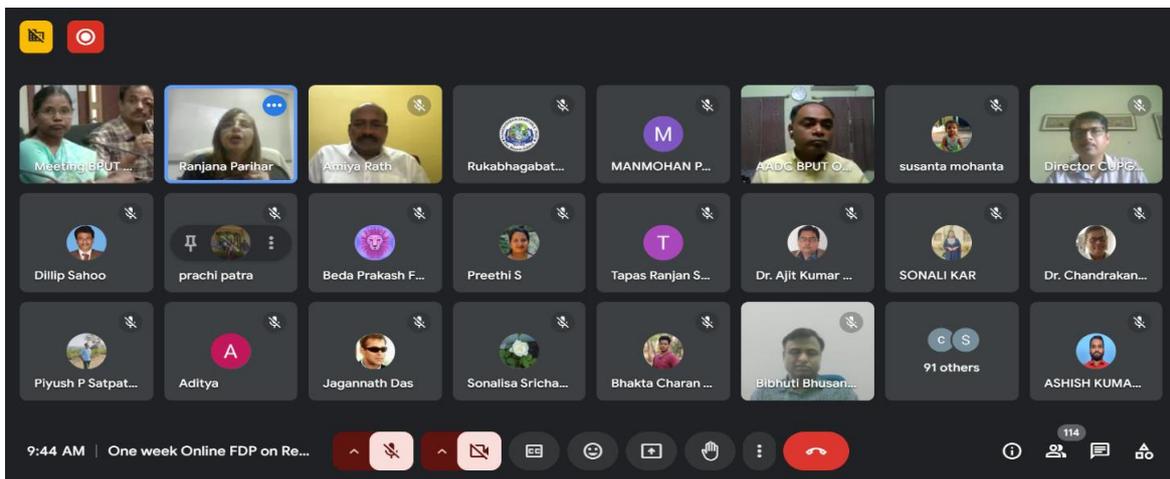
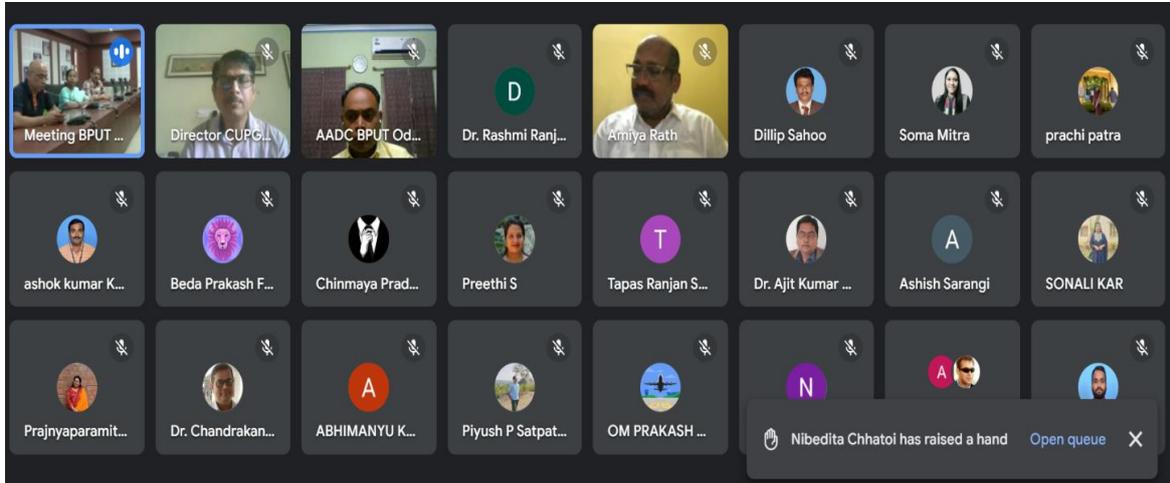
This FDP provided an enriching platform for academic professionals to expand their research horizons, gain hands-on exposure to modern tools, and engage in meaningful discussions with peers and experts. The organizing team expresses gratitude to all speakers, participants, and supporting staff for contributing to the success of this initiative.

PICTURE GALLERY



One-Week online FDP on Research Methodology & Grant writing
Association with AIU-AADC-BPUT
24th – 28th March 2025

PICTURE GALLERY



ABOUT US

The Biju Patnaik University of Technology (BPUT), located in Rourkela, Odisha, was established in November 2002 by an Act of the Government of Odisha. Its primary objective is to ensure high-quality technical education across the state through a common curriculum and uniform evaluation standards.

The foundation stone for BPUT was laid in 2003 by Dr. A.P.J. Abdul Kalam, then Hon'ble President of India. Since then, the university has expanded significantly, now including 137 affiliated and constituent colleges and serving a student population exceeding 100,000. BPUT offers a wide range of undergraduate and postgraduate programs in fields such as Engineering, Architecture, Business Management, and Computer Applications. It is also a leading institution for Ph.D. programs across various disciplines.

BPUT boasts a vast alumni network, with over 100,000 graduates contributing globally to industries, academia, and research. The university actively fosters innovation and collaboration through events like the BPUT Research Conclave, BPUT Hackathon, BPUT Tech Carnival, and BPUT Industry-Academia Conclave. Annually, BPUT also hosts several Faculty Development Programs (FDPs) to enhance educators' skills and knowledge.

BPUT is committed to academic excellence, research, and industry partnerships, aiming to prepare future engineers, architects, and managers for success. The university operates on the philosophy of "Think Good, Do Good, Be Good," viewing education as a service rather than a business. Its dynamic model, coupled with qualified faculty, skilled staff, and excellent infrastructure, makes it a highly sought-after institution for technical education.



<https://www.bput.ac.in/>

