

## **Contribution to Technical Education:**

- 1) Research project on ‘Development of ranking framework for polytechnics’ Rs.11 lakhs, at NITTTR K, 2023-25, Institutional project, Completed.

## **Journals -4 No.**

- 1) Rayapati Subbarao, ‘Outcome Based Approach Applied to a Mechanical Engineering Course to Advance the Teaching-Learning Processes’, International Journal of Engineering Education, Vol. 39 (2), pp. 369–375, 2023. (SCI, Scopus indexed)
- 2) Rayapati Subbarao, ‘Analysis of the Ability of ‘Understanding’ in Support of its Measurability’, International Journal of Engineering Education, Volume 39 (3), pp. 584-591, 2023. (SCI, Scopus indexed)
- 3) Rayapati Subbarao, ‘Analysis on the appropriate Pedagogy approaches applicable for ‘Engineering Thermodynamics’ Course’, International Journal of Engineering Education, Volume 40 (1), pp. 75-82, 2024. (SCI, Scopus indexed)
- 4) Rayapati Subbarao, ‘Sustainability Aspects of Core Engineering Programs in View of Increasing Demand for Computer Science Related Programs’, International Journal of Engineering Education, Vol. 42, No. 3, pp. 613–625, 2026. (SCI, Scopus indexed)

## **Book Chapters -2 No.**

- 1) Rayapati Subbarao, ‘Application of OBE approach for thermodynamics course in order to improve the overall teaching-learning practice’, Proceedings of Engineering Education, pp. 62-29, NITTTR Kolkata, India, 2021. ISBN: 978-81-956423-0-4.
- 2) Rayapati Subbarao, ‘Real time analysis of CO and PO attainment and their significance in case of a post graduate engineering program’, Proceedings of Engineering Education, pp. 70-76, NITTTR Kolkata, India, 2021. ISBN: 978-81-956423-0-4.

## **International Conference papers – 4 No.**

- 1) Rayapati Subbarao, Trisha Biswaghri and Sukanta Kumar Naskar, ‘Selection of sample for ranking mechanism of technical institutes in India offering energy engineering and allied programs’, 94, 1<sup>st</sup> International Conference on Energy, Environment, and Green Technology (ICEEGT 2025), NITTTR Kolkata, April 2025.
- 2) Rayapati Subbarao, Trisha Biswaghri and Sukanta Kumar Naskar, ‘Determination of appropriate sample size for the ranking of technical institutes in a region to ensure more sustainability’, ICGTS-82, International Conference On Green Technology & Sustainability (ICGTS 2025), NITTTR Kolkata, May 2025.
- 3) Rayapati Subbarao and Sukanta Kumar Naskar, ‘Selection of appropriate parameters for ranking the technical institutes offering energy engineering programs’, GCASSF2025\_RS\_02, International Conference On Global Climate Action: Strategies for a Sustainable Future (GCASSF 2025), NITTTR Kolkata, Aug 2025.
- 4) Rayapati Subbarao, Trisha Biswaghri, Sukanta Kumar Naskar, Ascertainment of appropriate sample size for the ranking of technical institutes in a region to ensure more sustainability Paper ID – 163, 1<sup>st</sup> International Conference on Advances in Mechanical and Aerospace Sciences, (ICAMAS-2026), NIT Arunachal Pradesh, 10<sup>th</sup> –12<sup>th</sup> March, 2026

**Programmes Development for Gyan Darshan Channel - 40 number of videos of 30 minute duration** are completed in the area of NBA accreditation for polytechnics, Values and Ethics in Teaching and OBE.

### **MOOC Course -1 no**

**On ‘Academic and Research Report Writing’**, along with Dr. Samir Roy and Dr. Kinsuk Giri. Out of 31 videos, 17 videos are prepared by me.

#### ✓ **MOOC course on Academic Research Report Writing**

Successfully run for 9 times in the last 5 years.

- 7<sup>th</sup> Jan 2019 to 1<sup>st</sup> Mar 2019 - **4472 participants**
- 27<sup>th</sup> Jan 2020 to 16<sup>th</sup> Mar 2020 - **6241**
- 20<sup>th</sup> July 2020 to 12<sup>th</sup> Oct 2020 - **8345**
- 31<sup>st</sup> Jan 2021 to 12<sup>th</sup> Apr 2021 - **8146**
- 30<sup>th</sup> July 2021 to 31<sup>st</sup> Oct 2021 - **10563**
- 31 Jan 2022 to 31 Mar 2022 – **7237**
  
- 29 Jul 2022 to 30 Sep 2022 – **7711**
- Jan 2023 to Mar 2023 – **10,000**
- Jul 2023 to Oct 2023 – **7,086**

### **AICTE NITT Mentor Training Program**

- ✓ Lectures on Module 2: *Professionalism and Sustainability* in the training programmes offered by NITTTR Kolkata for Mentors.

### **With CPSC Manila**

- ✓ My Training Program on “Accreditation and Certification in Achieving Quality Assured TVET” is selected by CPSC, to be conducted for TVET institutes in India, 7<sup>th</sup> -11<sup>th</sup> Feb, 2022.
- ✓ I have been short listed by the Ministry of Education for the CPSC’s Online Regional Program on “Developing Context-Based Vocational Pedagogy”, 26-30 April 2021. Successfully completed the same.

### **Curriculum Development**

- ✓ Involved in the curriculum development of Meghalaya, Nagaland and Arunachal Pradesh. For Mechanical and Automobile Engineering programmes.
- ✓ Involved in the curriculum development for the PG programmes of MAKAUT and NITTTR K (Deemed to be University).
- ✓ Coordinated two workshops as coordinator as well in Itanagar in June 2022 and Jan 2023.
- ✓ For the state of Odisha, Involved in the curriculum development of Automobile Engineering and Mining Engineering programmes.