# Workshop Report

**Title:** *Physics in Action: Experimental Learning with Prof. H. C. Verma*
**Date:** Thursday, 27th November 2025
**Time:** 9:30 AM – 4:00 PM
**Venue:** Royalton Hotel, Chirag Ali Lane, Mahesh Nagar, Abids, Hyderabad
**Organized by:** Bharati Bhawan Publishers & Distributors in collaboration with National Anveshika Network of India (NANI) under IAPT

## 1. Introduction

A one-day workshop titled **"Physics in Action: Experimental Learning"** was conducted by renowned physicist and educator **Prof. H. C. Verma**. The event aimed to promote hands-on, curiosity-driven learning of physics among teachers and to demonstrate simple yet powerful experiments for classroom use.
Teachers from various institutions participated, with the goal of enhancing their pedagogical methods and strengthening conceptual clarity among students.

## 2. Objectives of the Workshop

- To reimagine physics teaching through practical demonstration.
- To strengthen understanding of core physics principles through live demonstrations.

## 3. Workshop Proceedings

### Session I

Prof. H. C. Verma began with engaging demonstrations that highlighted the importance of **Newton's First Law of Motion and Optics**, especially the concept of **grazing incidence**..

- Simple, low-cost setups were used to show inertia and the tendency of objects to remain in their state unless acted upon by an external force.
- The experiments illustrated how everyday materials can effectively communicate foundational physics laws.
- Prof. Verma demonstrated how light striking a surface at a very small angle can create visible reflections even on **opaque objects**, making it a useful classroom technique.
- This helped teachers understand how to creatively demonstrate reflection beyond the usual mirror experiments.

### Session II

The second session focused on fluid physics

**Archimedes' Principle**

- Experiments showing buoyancy, upthrust, and displacement were demonstrated using simple containers and weights.
- The session emphasized conceptual understanding rather than memorization.

### Session III

After lunch, Prof. Verma moved to electromagnetism.

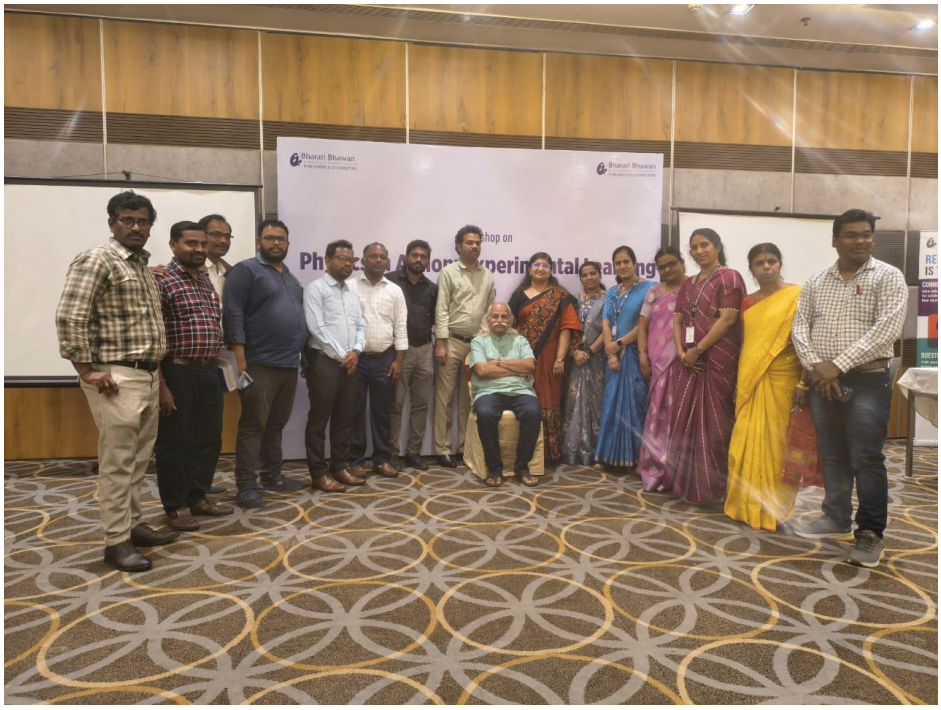
**Electromagnetic Induction**

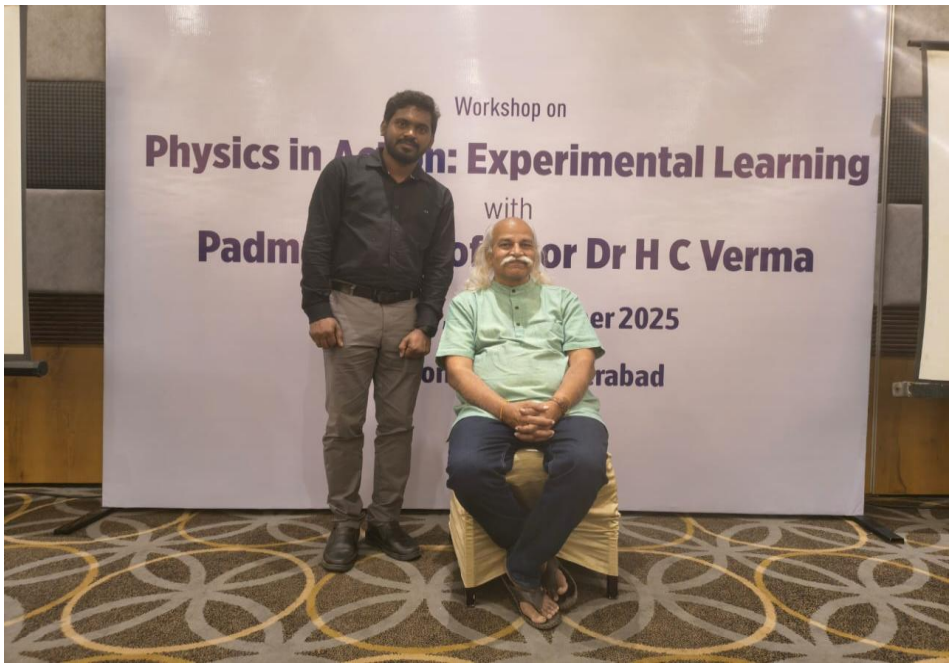
- Simple coils, magnets, and LEDs were used to show how motion induces current.
- Prof. Verma explained Faraday's Law through hands-on activities, making the topic accessible and engaging for teachers.

## 4. Highlights from the Workshop

- Use of **cost-effective, classroom-friendly** experimental setups.
- Strong emphasis on **curiosity, creativity, and experiential learning**.
- Active participation and question-answer interactions throughout the day.

# 5. Photographs from the Workshop






# 6. Conclusion

The workshop was highly enriching and provided valuable insights into making physics teaching more interactive and engaging. Prof. H. C. Verma's practical approach to demonstrating core physics concepts inspired participants to incorporate similar techniques into their classrooms.

Overall, the program successfully promoted experiential learning and strengthened teachers' confidence in demonstrating physics principles through simple experiments.