

## INNOVATIONS IN TEACHING AND LEARNING

**Subject:** Signals & Systems

**Class:** S.Y. BTech E&TC

**Topic:** Special Probability Distributions

### **NAME OF THE ACTIVITY: Brown Bag Activity**

- I. **Concept:** A bag is filled with papers having different topics of the subject written on them. Students are asked to pick a paper from bunch and they are given an opportunity to explain it.
- II. **Objective( Goal):** Self learning , Exchange of knowledge
- III. **Appropriateness (Relevance of Selected Method):** This method forces students to get in depth knowledge of all the allotted topics.
- IV. **Effective Presentation (Implementation Details):**
  - A. A bag is filled with paper chits mentioning different topics on 'Special Probability Distributions' from Unit-6: Probability and Random Signals of the subject Signals & Systems. The topics are as follows,

Topic	Pg No. of reference Material
1. Bernoulli Distribution	(pg.55)
2. Binomial Distribution:	(pg.56)
3. Geometric Distribution	(pg.57)
4. Negative Binomial Distribution:	(pg.58)
5. Poisson Distribution	(pg.59)
6. Discrete Uniform Distribution	(pg.60)
7. Continuous Uniform Distribution	(pg.61)
8. Exponential Distribution	(pg.61)
9. Gamma Distribution	(pg.62)
10. Normal (or Gaussian) Distribution	(pg.63)

- B. The detailed description of topics(Formulae of CDF, mean, variance as well as CDF graph) are made available to them at the time of activity.
- C. The required study material is provided to them in advance and asked to learn all the 10 Special Probability Distributions.
- D. On the day of activity, out of whole strength of class, roll numbers are selected by random number generation. The randomly selected student will pick up one chit and gives the explanation on the picked up topic.



E7	=RANDBETWEEN(1,76)				
	B	C	D	E	F
1					
2					
3					
4					
5				Roll No.	
6					
7				68	
8					
9					

Fig.1 Random Roll Number generation

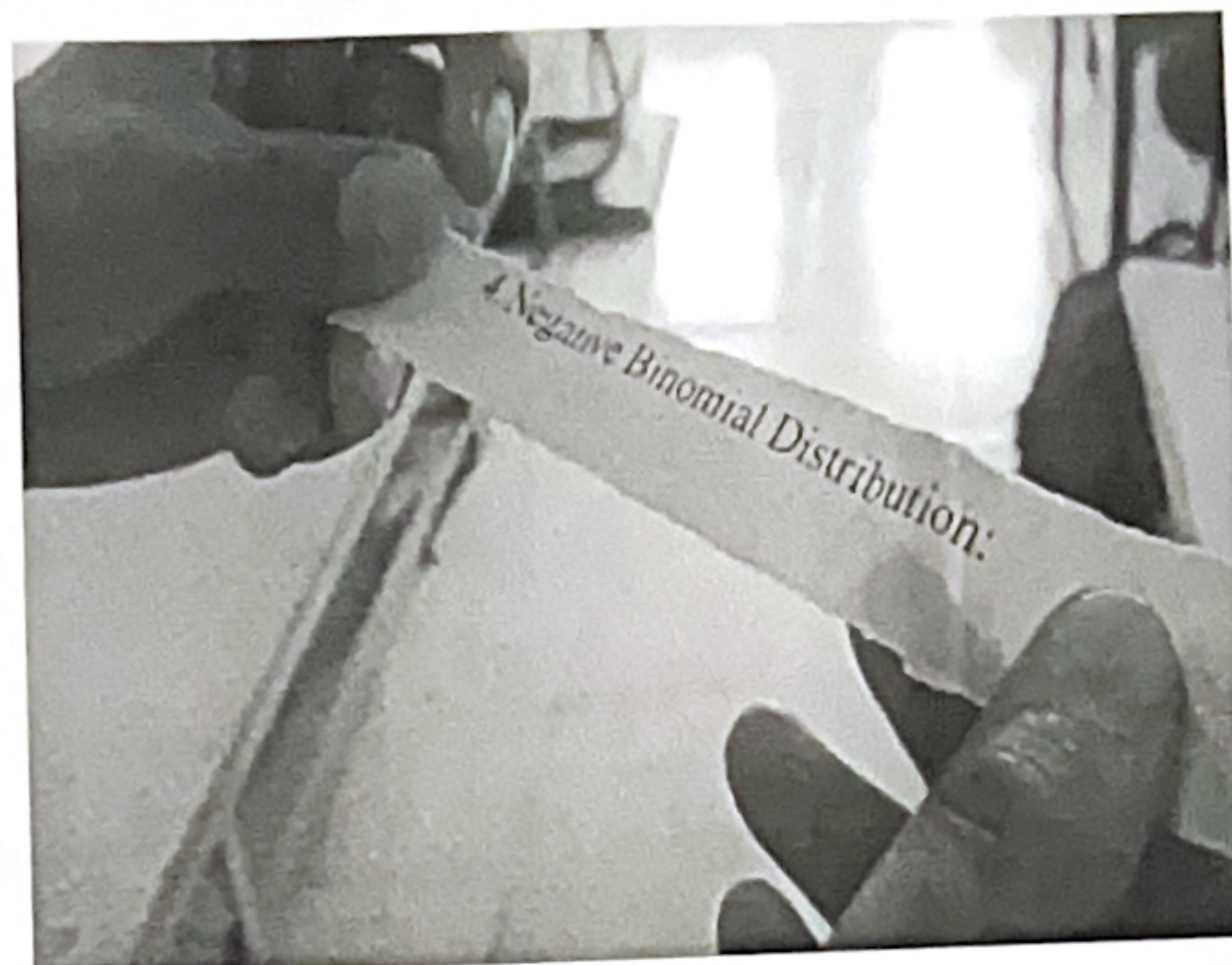


Fig.2 Topic Picked-up

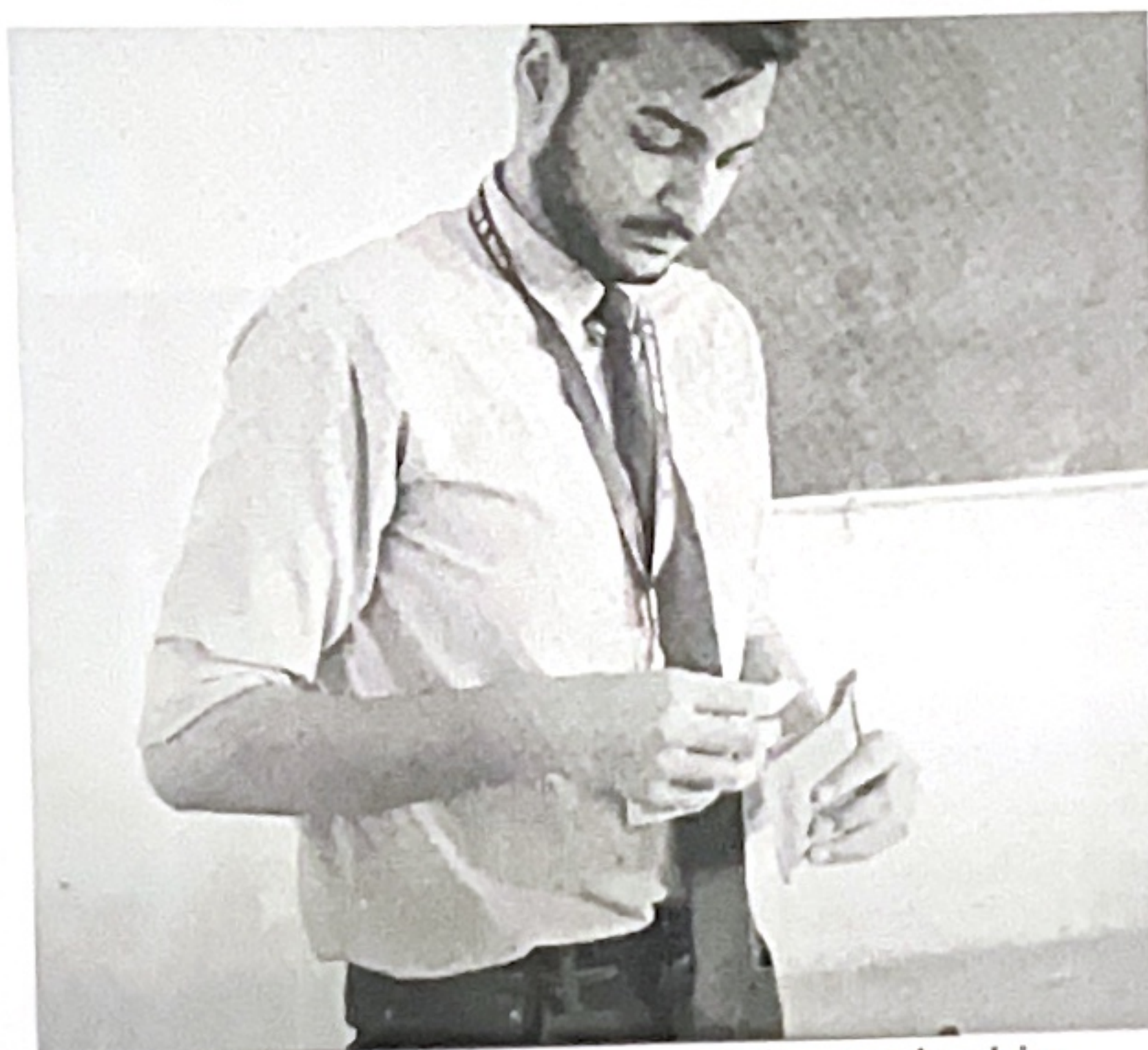


Fig.3 Brown bag containing topic chits

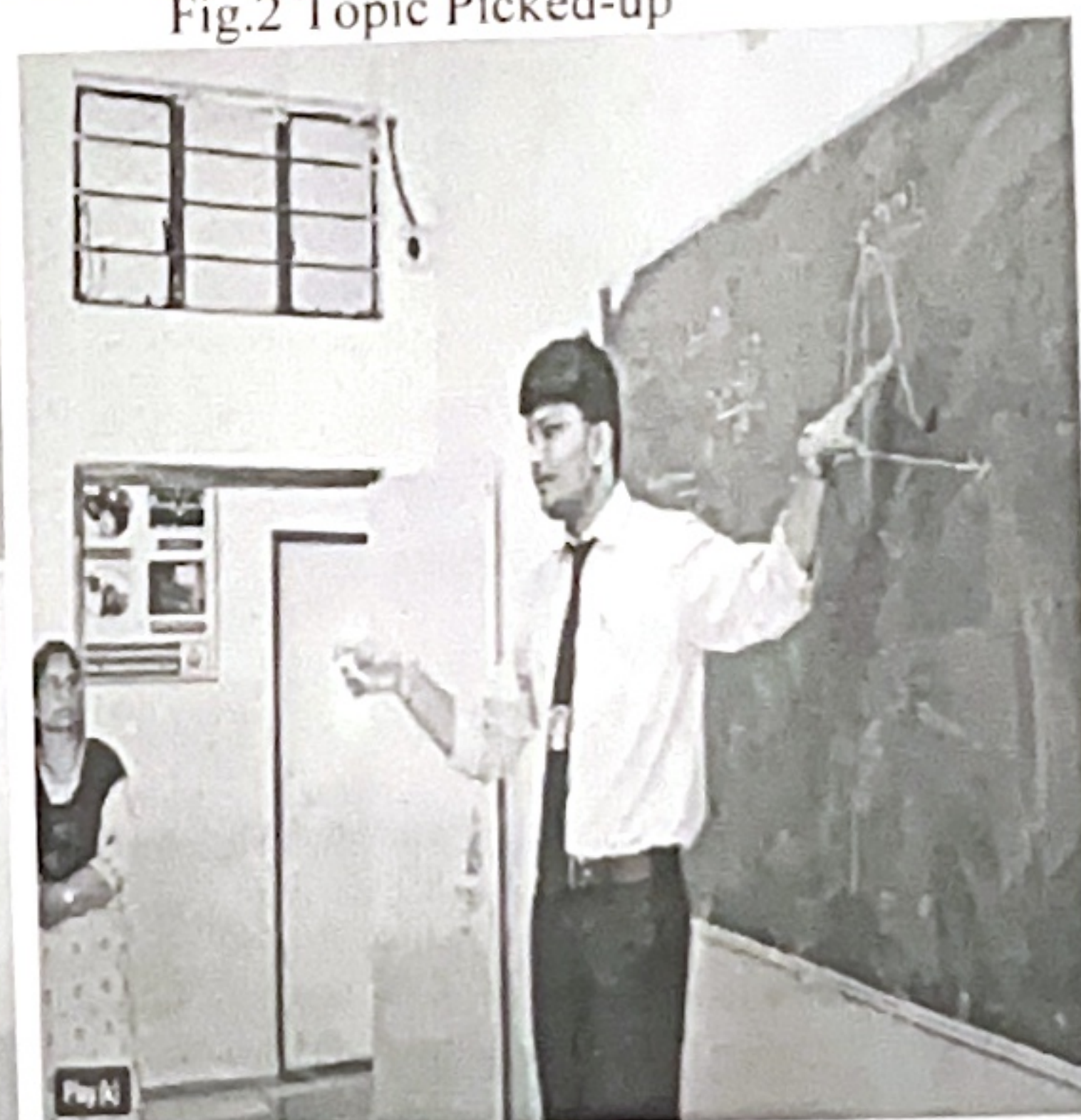


Fig.4 Student explaining the topic

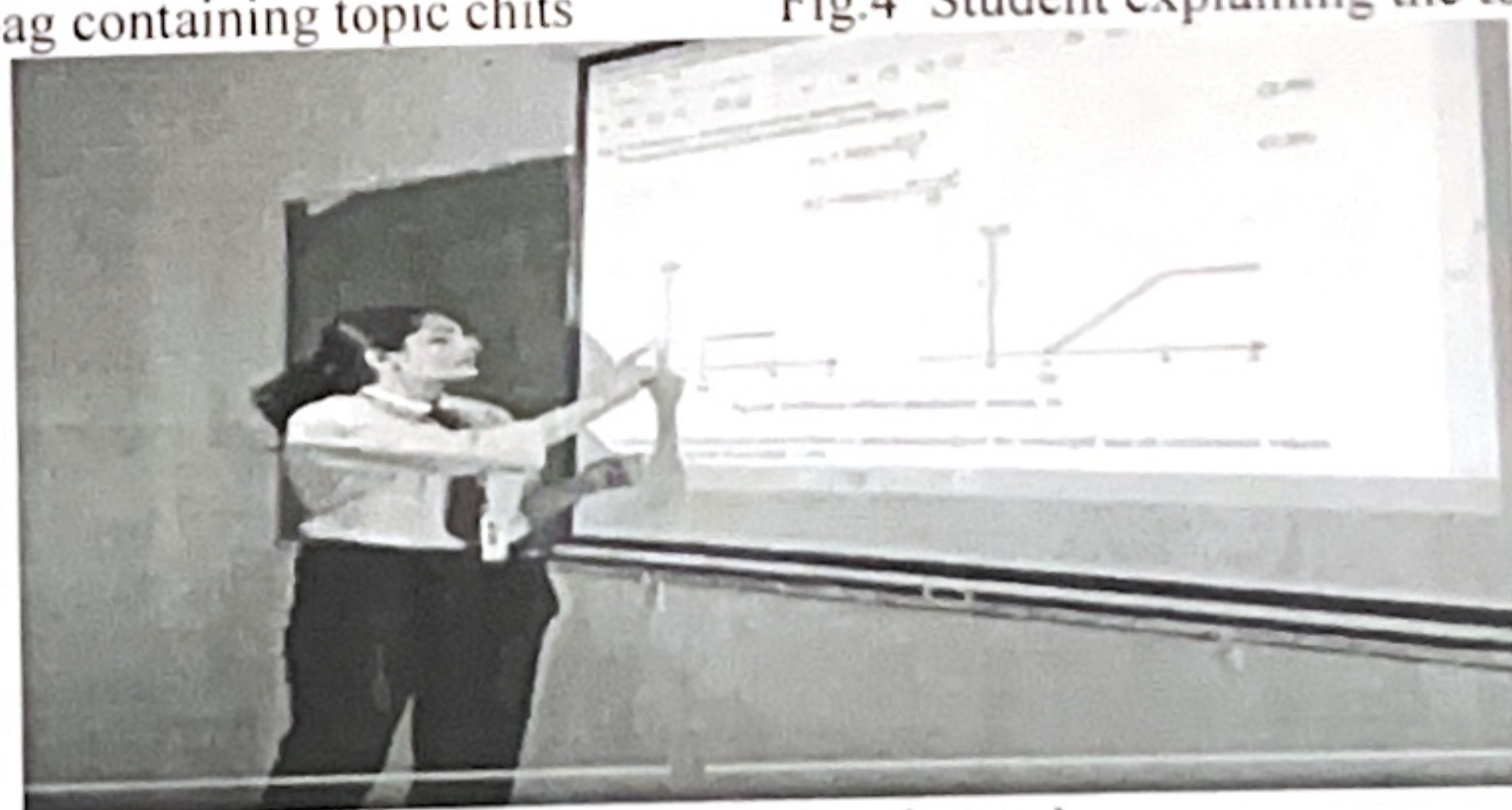


Fig.5 Student explaining the topic

\*Activity is available on YouTube Link:- <https://youtu.be/34Wjd9Z0ly8>



## V. Results (Impact):

- A. This activity inculcates the habit of self learning among students.
- B. Encouraged students to participate in activity.
- C. In depth understanding of a topic.
- D. Stage daring, presentation skills enhancement.

## VI. Reproducibility and Reusability by Other Scholars for Further Development

Sr.No	Innovation Used by	Details of User	Purpose of Reproducibility and Reusability
1	Mr. S.P. Vibhute	SYB Course coordinator	Used in other class of SY E & TC

## VII. PEER REVIEW AND CRITIQUE

Category: Internal/External/Interdepartmental

Score: (1:Least 2: Moderate 3:Highly)

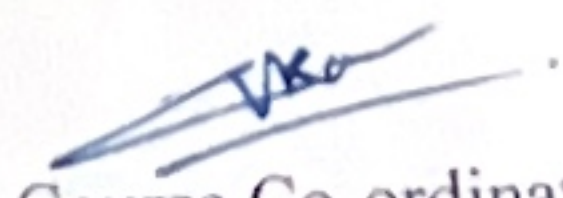
Question 1. Is this Innovative Teaching and Learning Methodology useful during content delivery?

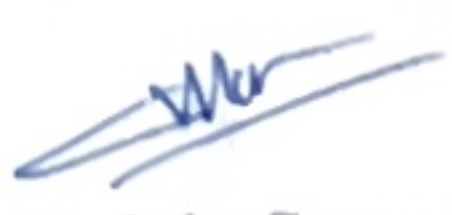
Question 2. Did this innovation increase student motivation or participation?

Question 3. Will it show improvement in student learning?

Question 4. Suggestions for improvement in future iterations.

Category	Name of Peer	Organization	Q.1	Q.2	Q.3	Q.4 Suggestion/Critique
Internal	Mr. S.P. Vibhute	RSCOE	3	3	3	Can be organized on regular basis to improve involvement of students.
External	M.S. Veena Kulkarni	PCCOE	3	2	3	well arranged Don't provide reference material while explanation

  
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