

# Using Kahoot! as an assessment tool to enhance learning in a traditional lecture-based classroom

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## Introduction

- Games have been used in education to engage students in a fun way as a means to enhance learning.
- A digital tool that has been widely used in schools for formative assessment, to enhance classroom participation and assess learners' cognitive knowledge is **Kahoot!**.
- Kahoot is a free online tool that allows the implementation of quick quizzes to assess students' knowledge in real time and particularly will be useful in formative assessment. Students play using mobile phones.

## Objectives

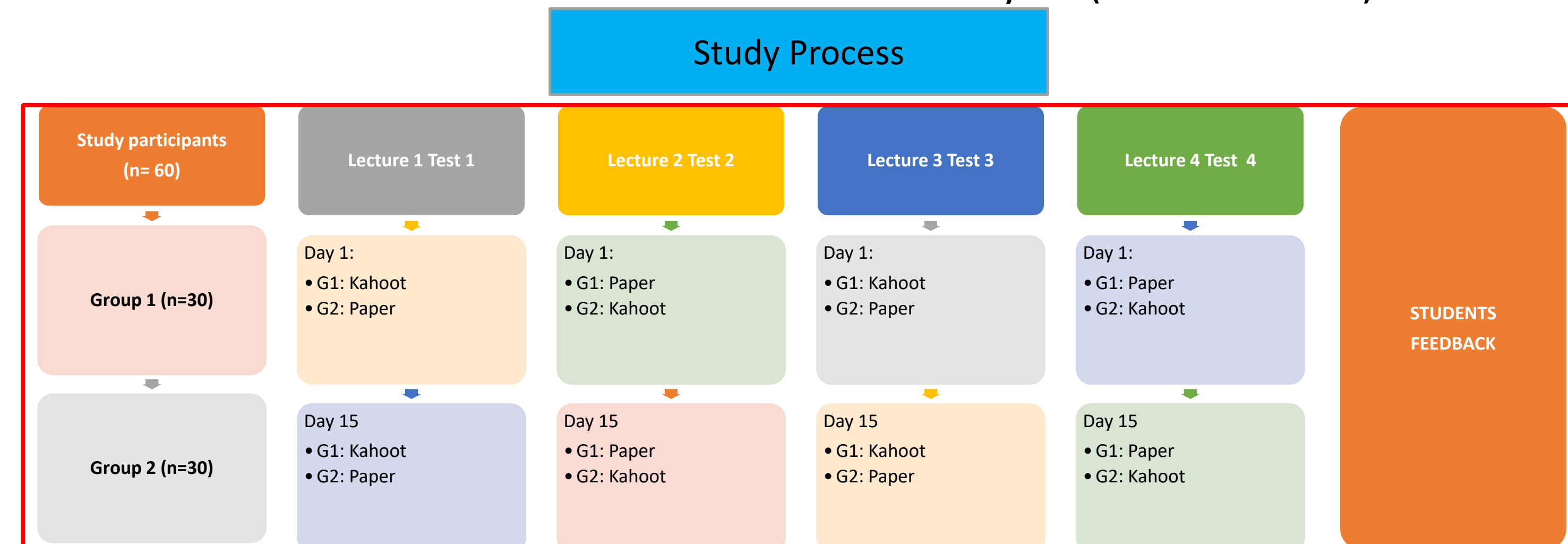
**Overall Goal:** To measure the extent to which the popular game based online platform of "Kahoot!" is effective as a tool of assessment for learning

**Specific objectives:**

- To find out whether assessment done after a class using Kahoot! enhances learning of the students
- To find out whether assessment done using Kahoot! improved long term performance of the students.
- To assess usefulness of Kahoot! in engaging students with the subject, particularly towards the end of the class.

## Methods

- Sample size = 60
- Experimental group (Kahoot) = 30
- Control group (Paper) = 30
- Study design: Crossover study
- Number of Sessions: 4
- Lecture Topics-Beta lactam antibiotics, Contraception, Anti Tubercular drugs, Corticosteroids
- MCQ Tests conducted:  
Day 1 (Immediately post lecture)  
Day 15 (Retention test)



## Results - Performance scores

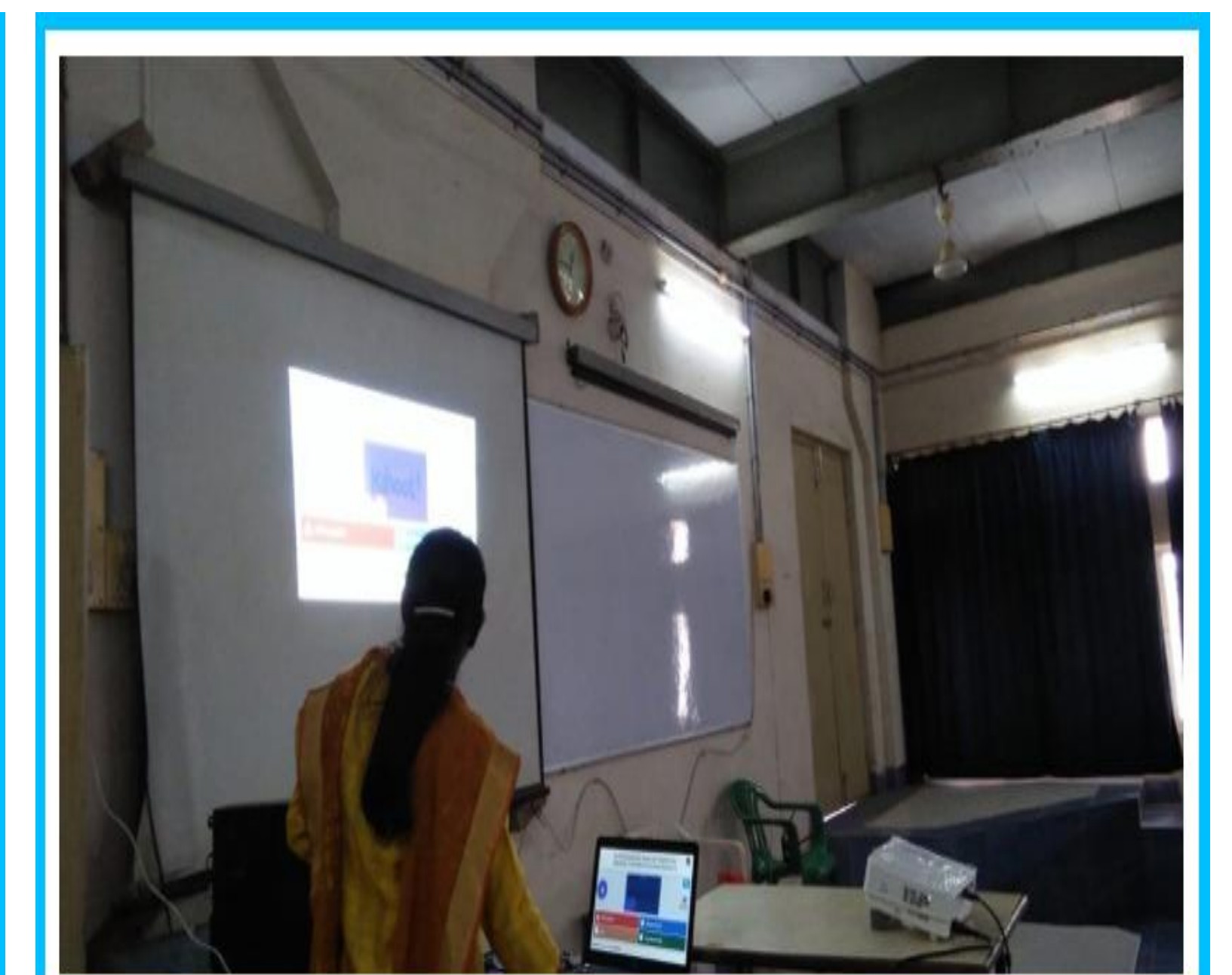
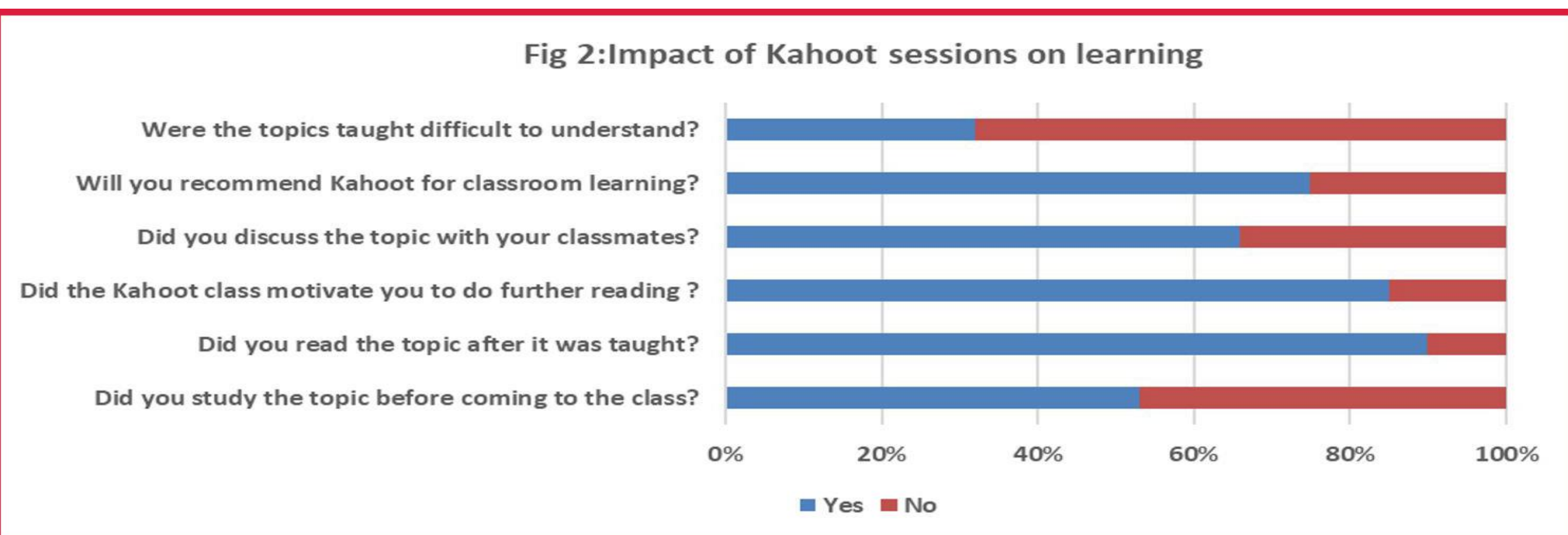
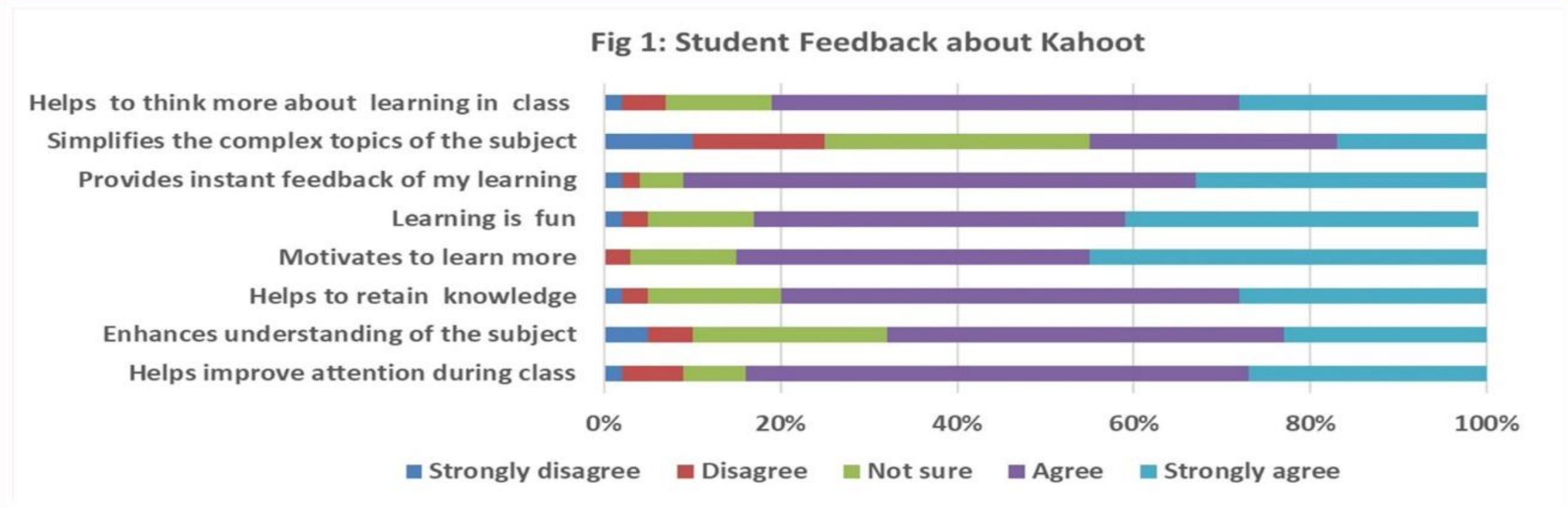
**Table 1 - Comparison of assessment of initial test (Day 1) and Retention test (day 15) with in groups**

Session	Groups (n = 30)	Day	MeanScores	SD	P value	Effect Size (Cohens d)
Beta lactam antibiotics	Kahoot	Day 1	17.5	5.67	.00002*	0.802 (high)
		Day 15	21.8	4.95		
	Control	Day 1	18.6	5.57		
		Day 15	20.03	6.25		
Contraception	Kahoot	Day 1	16.66	4.81	.00001*	0.717
		Day 15	20.26	5.23		
	Control	Day 1	16	5.91		
		Day 15	19.83	7.7		
Anti-tubercular drugs	Kahoot	Day 1	20.53	4.14	.00001*	0.706
		Day 15	23.55	4.41		
	Control	Day 1	20.7	5.9		
		Day 15	22.5	6.14		
Corticosteroids	Kahoot	Day 1	19.73	4.13	.00001*	0.901 (high)
		Day 15	23.26	3.69		
	Control	Day 1	15.1	5.66		
		Day 15	17.53	6.22		

\*P value statistically significant at P<.05, Paired t test

- Out of 120 respondents in each group who attended the four sessions, 75% (90 respondents) in the experimental group (Kahoot!) scored 17.7% higher than the control group on the immediate post-lecture test.
- Additionally, 76.6% (92 respondents) from the experimental group performed better than the control group on the test administered after 15 days.

## Results - Student Feedback



## Conclusion

- Key findings revealed that Kahoot! improved the performance scores.
- Kahoot! enriched the quality of student learning in the classroom, with the highest influence reported on motivation(85%) , instant feedback(91%),improved attention(84%),fun(82%) and improved learning experience(81%).
- Using Kahoot! in the classroom gives teachers the ability to track student performance of the game, make adjustments to content or teaching method. Hence Kahoot! helps teachers integrate technology to their subject areas.
- Student engagement with this game is high because it is fast paced, visual, and energetic. Learning style changed. Motivation and feedback helped self directed learning.
- Limitations of Kahoot! is it is difficult to administer problem based questions as there is a constraint on word limit and time limit. Uninterrupted internet connectivity is a must while playing Kahoot!.

## Implications

- Kahoot! is a promising formative assessment tool that is feasible, practical and makes learning fun and enjoyable.
- It can be introduced for formative assessment in a traditional classroom to enhance learning.

## Acknowledgements

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## References

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