



AN OBSERVATIONAL STUDY OF INTERACTIVITIES USED IN RASAKALPA TEACHING FOR SECOND YEAR B.A.M.S STUDENTS

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ABSTRACT

Rasashastra and *Bhaishajyakalpna* means Ayurvedic pharmaceuticals, in this subject student of Second BAMS are supposed to learn various *kalpas* i.e. Formulations of Rasa and *Bheshaja*. They have to understand the mechanism of *kalpas*, its ingredients, method of preparation, its uses, dose, *anupan* etc. They have to remember all the ingredients and uses. Also they have to understand the role of each ingredient in their effectiveness. Mechanism and therapeutic effect of whole formulation. Interactive techniques are useful to encourage the student for learning. They will actively participate in the teaching learning process. They can better understand the topic. Their interest about the subject will also increase. Therefore the student will study the *Rasakalpas* very well. This will help the student to remember the ingredients and uses of *kalpas*. By better knowledge of the *kalpas* they can use it efficiently in the practice. With the help of various interactive techniques of teaching methods student will motivate and develop their interest to study *Rasakalpas* and use it effectively. This educational innovation project is assigned in the Advance Course in Health Science education by MET, MUHS. Four interactivities like Read aloud, Recall, Think-Pair-Share, Quiz are selected for this project. Evaluation of these interactivities is presented in this article.

Keywords: Interactivities, Education, Read aloud, Recall, Think-Pair-Share, Quiz

INTRODUCTION: In *Rasashastra* various *Rasakalpas* i.e. formulations are described. These *Rasakalpas* contain many ingredients. Each ingredient has some properties. By synergistic action of these ingredients *Rasakalpas* are used in therapeutics. These ingredients and their uses cannot be remembered by the students very easily. Therefore they don't understand the importance of *kalpas* and their uses. They cannot use the *kalpas* effectively in Practice. So the interactivities in the teaching of *Rasakalpas* should be implemented. Interactive techniques are useful to encourage the student for learning. They will actively participate in the teaching learning process. They can better understand the topic. Their interest about

the subject will also increase. Therefore the student will study the *Rasakalpas* very well. Their interest in learning will be increased. This will help the student to remember the ingredients and uses of *kalpas*. By better knowledge of these *kalpas* they can use it efficiently in the practice. These activities are beneficial to developed competencies like cognitive, psychomotor and affective.

There are various interactivities are described¹. Following interactivities are selected for the study.

- Read aloud-Choose a small text to read aloud and ask student to pay particular attention during this phase of lecture. A small text read orally in a larger lecture can focus attention.

- Recall- This method of starting each session has five steps to reinforce the previous sessions material, recall it, summaries it, phase a remaining question, connect it to the class as a whole and comment on that class session.
- Think-Pair-Share-Student share and compare possible answers to a question with a partner before addressing the larger class.
- Quiz- Divide the class at least into two groups and announces a competition for most points on a practice test. Let them study a topic together and then give that quiz, tallying points. After each round let them study the next topic before quizzing again. The point should be carried over from round to round. The student impulse for competition will focus their engagement onto the material itself.

AIM AND OBJECTIVES:

1. To remember the ingredients and uses of *kalpas*.
2. To understand the therapeutic effect of *Kalpas*.
3. To know the importance of the interactive techniques in teaching

MATERIALS AND METHODS:

1. Permission of Institute was taken.
2. Consent of student- Total 30 students were willing to participate in the project. Their written consent was taken.
3. Faculty members and students were sensitized about interactivities in teaching as a teaching tool and assessment methods.
4. After the discussion with faculty members five *Rasakalpas* of Second BAMS syllabus were selected viz.

1. *Arogyavardhini*²
2. *Sutshekhhar Rasa*³
3. *Praval Panchamrut*⁴

4. *Loknath Rasa*⁵

5. *Samirpannga Rasa*⁶

Interactivity techniques selected-

1. *Arogyavardhini*- Routine didactic lecture
2. *Sutshekhhar Rasa*- Recall
3. *Praval Panchamrut*- Read aloud
4. *Loknath Rasa*- Think-Pair-Share
5. *Samirpannga Rasa* - Quiz
5. MCQs and Feedback forms were prepared.
6. Sessions: Participants were informed the various interactive techniques, its necessity. Total five sessions of 30 minutes were taken for teaching *Rasakalpas*.

- First session – In the First session *Rasakalpa* ‘*Arogyavardhini*’ was taught by routine didactic method.
- Second session-Second *Rasakalpa* ‘*Sutshekhhar*’ was taught. After teaching Recall Interactivity was introduced and all the points were recall, summarized.
- Third session- *Rasakalpa* ‘*Praval Panchamrut*’ was taught, after teaching Read aloud method was applied. The content was read by students repeatedly.
- Fourth session – Fourth *Rasakalpa* ‘*Lokanath Rasa*’ was taught and then Think-Pair –Share activity was taken. In this activity student was first asked to read the content, asked the questions and discussed with their partner before answered.
- Fifth session- Fifth *Rasakalpa* ‘*Samirpannga*’ was taught. Then student was asked to revise the content and Quiz was taken.

After each activity discussions were carried out. MCQ test was carried out after each session.

Feedback forms were collected after last session.

RESULT: Five MCQ Tests were carried out. Results of these five tests were recorded.

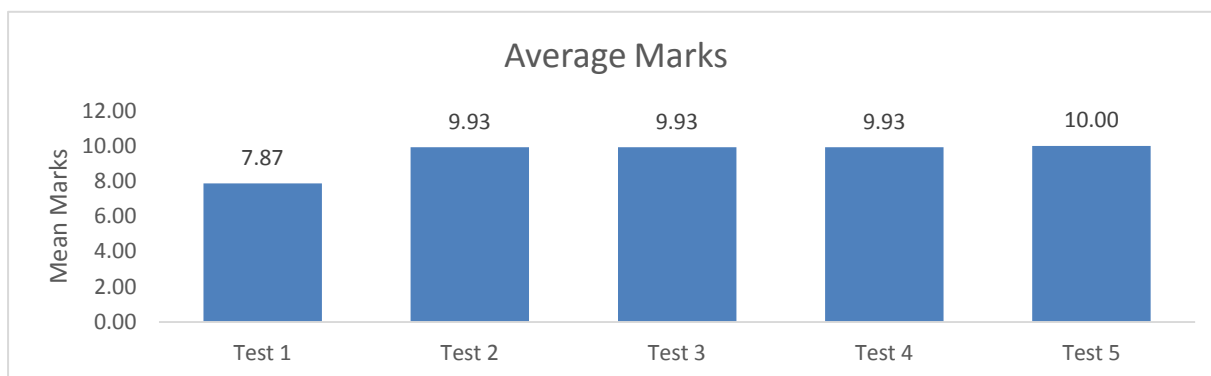
Table No.1- MCQ marks of five tests of 30 students

Sr. No.	MCQ Test-1 Marks out of 10	MCQ Test-2 Marks out of 10	MCQ Test-3 Marks out of 10	MCQ Test-4 Marks out of 10	MCQ Test-5 Marks out of 10
1	6	10	10	10	10
2	8	10	10	10	10
3	10	10	10	10	10
4	6	10	10	10	10
5	8	10	10	10	10
6	8	10	10	10	10
7	8	10	10	10	10
8	8	9	10	10	10
9	8	10	10	10	10
10	8	9	10	10	10
11	8	10	10	10	10
12	10	10	10	10	10
13	10	10	9	10	10
14	8	10	10	10	10
15	8	10	10	10	10
16	6	10	10	9	10
17	8	10	10	10	10
18	6	10	10	10	10
19	8	10	10	10	10
20	8	10	10	10	10
21	10	10	10	10	10
22	8	10	10	10	10
23	6	10	10	10	10
24	6	10	10	9	10
25	6	10	10	10	10
26	8	10	10	10	10
27	8	10	10	10	10
28	10	10	9	10	10
29	8	10	10	10	10
30	8	10	10	10	10

Statistical analysis:

Table 2: Descriptive Statistics

Group	N	Mean	SD	SE
Test 1	30	7.87	1.28	0.23
Test 2	30	9.93	0.25	0.05
Test 3	30	9.93	0.25	0.05
Test 4	30	9.93	0.25	0.05
Test 5	30	10.00	0.00	0.00
Total	150	9.53	1.03	0.08



In Test 1, average marks of the students was 7.87 with standard deviation of 1.28, in Test 2, Test 3, and Test 4 average marks was 9.93 with standard deviation of 0.25 while in Test 5 average marks of the students was 10 with standard deviation of 0.

Table 3: ANOVA Table

	Sum Squares	df	Mean Square	F	P-Value
Between Groups	104.267	4	26.067	71.225	0.000
Within Groups	53.067	145	.366		
Total	157.333	149			

For comparison among 5 groups, we have used one way ANOVA test. From above table we can observe that P-Value is less than 0.05 hence we conclude that there is significant difference among the 5 group

Table 4: Post hoc analysis

Group 1	Group 2	Mean Difference	Std. Error	P-Value
Test 1	Test 2	-2.06667*	0.16	0.000
	Test 3	-2.06667*	0.16	0.000
	Test 4	-2.06667*	0.16	0.000
	Test 5	-2.13333*	0.16	0.000
Test 2	Test 1	2.06667*	0.16	0.000
	Test 3	.00000	0.16	1.000

	Test 4	.00000	0.16	1.000
	Test 5	-.06667	0.16	0.993
Test 3	Test 1	2.06667*	0.16	0.000
	Test 2	.00000	0.16	1.000
	Test 4	.00000	0.16	1.000
	Test 5	-.06667	0.16	0.993
Test 4	Test 1	2.06667*	0.16	0.000
	Test 2	.00000	0.16	1.000
	Test 3	.00000	0.16	1.000
	Test 5	-.06667	0.16	0.993
Test 5	Test 1	2.13333*	0.16	0.000
	Test 2	.06667	0.16	0.993
	Test 3	.06667	0.16	0.993
	Test 4	.06667	0.16	0.993

For pair wise comparison we have used Post-hoc analysis, from above table we can observe that average marks of test1 is significantly different than other four tests. Also we have found that there is no significant difference in Test 2, Test 3, Test 4 and Test 5.

DISCUSSION: Interactivities like Recall, Read aloud, Think Pair Share and Quiz are very useful in teaching. These activities increased the student's interest in learning. It makes the student alert and active. This is also useful for those students who are shy. It can make the student bold, initiative. There are various interactivities are described. We can use these interactivities as per student's nature, type of group i.e. small group teaching, large group teaching, requirement of syllabus etc.

From this study it is observed that score of test in first routine method is average. But in other four sessions score of student is high. By these interactivities students become more active to learn. These activities are useful for them to remember the content of syllabus. They easily understand the concept. So they can use it

efficiently. This is reflected in the score of other four tests.

Statistical analysis also shows that an average mark of test1 is significantly different than other four tests. Also there is no significant difference in Test 2, Test 3, Test 4 and Test 5

Feedback from the students of these interactivities was also very positive. They liked these sessions very much. In these four activities they mostly like think-Pair-Share. This activity gives the time to think, discuss and involves the partner. Therefore may be this activity was preferred by the student.

CONCLUSION: From the results of study it can be concluded that the use of Interactivities in teaching is very useful. These activities increased the student's interest in learning. Students are very eager to participate in these activities of learning. They took keen interest in the learning of *rasakalpas*. They like these learning process to study *rasakalpas*. In routine teaching learning process if we took these types of interactivities students really start learning enthusiastically. They

will practice these activities in the group to learn the *rasakalpas*.

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