A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

COLLABORATIVE ACTIVITY
(Interpretation of Spectral Data)

ENGINEERING CHEMISTRY

DATE OF EXECUTION: 12/03/2022
AY: 2021-2022 SEM 1

Lavanya Nagamalla
Assistant Professor
INTRODUCTION ON PEDAGOGY:

Collaborative pedagogy believes that students will better engage with writing, critical thinking, and revision if they engage with others. Discussions of collaborative pedagogy also emerge in the technical communication field, a subset of rhetoric and composition. Technical communication incorporates collaborative pedagogy by attempting to bridge real work environments with university classrooms through group assignments.

IMPLEMENTATION:

1. Heterogeneous teams are formed with 6 members in each team, each team is assigned to interpret given spectral report.
2. The team will work on the spectral data for 15min by discussing among the team members and come to the conclusion within 15 min.
3. Students are asked to present the results on the stage as a team in 5 min.

PROOFS:

Image adapted from spectra adaptations © Dr Phil Brown 2020

1H NMR spectrum of 1-bromopropane

CH₃—CH₂—CH₂—Br

a 1.03
b 1.87
1H proton shift ppm

3.39

CH₂ protons split by CH₂ and CH₃ protons into a 1:5:10:5:1 sextet

b 1.87

(2)

CH₂ protons split by CH₂ protons into a 1:2:1 triplet

Spectral data distributed to the students
Interpretation of spectral data
**OUTCOME:**

Stimulates critical thinking and helps students clarify ideas through discussion and debate
Slow learners had opportunity learning from the peers

**E-RESOURCES/TEXTBOOKS REFERRED:**

*Links:* Not used

*Text books:* A textbook of ENGINEERING CHEMISTRY by Dr.Bharathi Kumari Yalamanchali

**ICT USAGE:**

Google search is used to collect the spectral data

**CONTENTS BEYOND THE SYLLABUS:**

No contents were covered that are beyond the syllabus

**RUBRICS:**

<table>
<thead>
<tr>
<th>TOTAL (5M)</th>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
<th>Category D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation (3M)</td>
<td>All the points are presented (3M)</td>
<td>Few points are missing (2M)</td>
<td>Many points are missing (1M)</td>
<td>No important points are presented (0M)</td>
</tr>
<tr>
<td>Content (2M)</td>
<td>Clear with content (2M)</td>
<td>Not the complete content is explained in the chart (1M)</td>
<td>Poor explanation of the chart (0.5M)</td>
<td>Couldn’t explain it (0M)</td>
</tr>
</tbody>
</table>

**TIME TAKEN TO COMPLETE THE ACTIVITY:** 60 min.
SUGGESTIONS GIVEN TO SLOW LEARNER: Student was not given the assignment marks and made him to write as a test for the same topic, revision of the topic for the poor performance was done.

CHALLENGES:
1. Assessing the slow performers.
2. Time for finishing the activity.
3. Involving all the students in participation.

NO. OF STUDENTS PARTICIPATED: 40
NO. OF BATCHES MADE: 5
STUDENT FEEDBACK:
1. Activity was interesting as it is a collaboration activity, students could learn from others and teach others.
2. Could put the knowledge of theory to the actual data interpretation which is very helpful to Them.
3. Slow learners were beneficial as it involved the learning from peer.

MODE OF FEEDBACK:
Oral feedback was taken.

Submitted by
HOD
Principal
Lavanya Nagamalla
Assistant Professor