RAMCO INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering

Academic Year: 2019 - 2020 (Even Semester)

Degree, Semester & Branch: VI Semester B.E. CSE

Course Code & Title: CS8602 Compiler Design

Type of Activity: Collaborative Learning

Topic: Simple Code Generation

Date: 12.03.2020

Type of Learning:

Collaborative Learning

Learning Objectives:

O1: To familiarize the students to understand simple code generator.

O2: To distribute the knowledge and experience obtained in concepts to make everybody reach the maximum level of understanding.

O3: To improve listening and communication skills.

Activity Description:

Collaborative Learning is an active learning strategy.

- Initially the students were asked to form a group. Each Group having 7 Members.
- Each Group formed by Fast learners, Average Learners, Slow Learners. Classification of students such as a bright student, average students, and slow learners is based on their academic performance (bright/average/slow learner) and skill.
- The course instructor allotted questions to each group and also instructed methods to answer the questions.
- The students discussed with their team members and asked doubt to the course instructor.
- Finally one representative from each group presented the solution to their allotted question.

Uses of Collaborative Learning:

- Students are actively participated in each group.
- It helps the students are made to work in a team and share their ideas to others and also improve their communication skills.
- It helps to focus attention and engage students in learning.

Justification for chosen the topic:

The Simple Code Generation is one of the important topic, and repeatedly asked in university question. This activity makes the students to get a sound knowledge in this concept. Students gain knowledge about generating a target code for an intermediate code and share their ideas with their classmates that improve creative thinking and oral communication skills.

Implementation of Think-Pair-Share:

- The course instructor gave different questions to each group and also explains how to answer the questions.
- The students were grouped and discussed about the same. Some of the questions are given below:

Q1: W=(A+B)+(A+C)+(A+C)

Q2:(a+b)-(e-(c+d))

Q3: D=(a-b)*(a-c)+(a-c)

Q4:((a+b)/(b-c)-(a+b)*(b-c)+f

Q5: a=b+c

d=a+c

Q6:(a+b)-(c-(d+e))

Q7:

t=a-b
u=a-c
v=t+u
a=d
d=v+u

Q8: x=a1/(b-c)-d*(e+f)

- The students were asked to discuss their group members and asked some doubts from the course instructor as shown in Figure 1-2.
- Finally, the one representatives from team1 (Yeswanthini) shown in Figure 3-5. From team2 Pavithra presented their concepts and participated in the discussion.

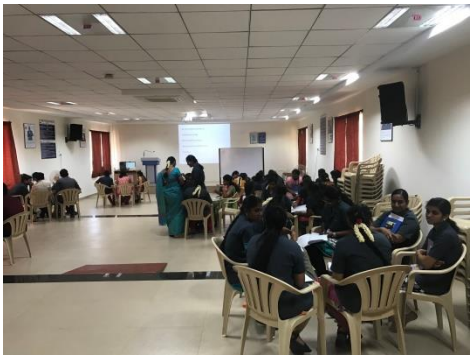

Figure 1

Figure 2

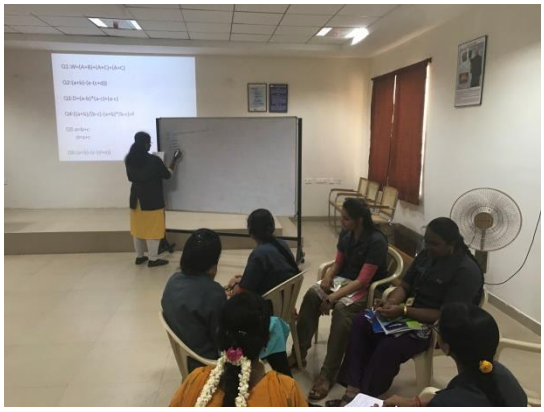

Figure 3

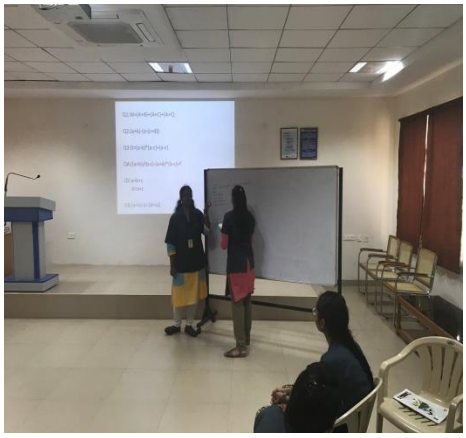

Figure 4

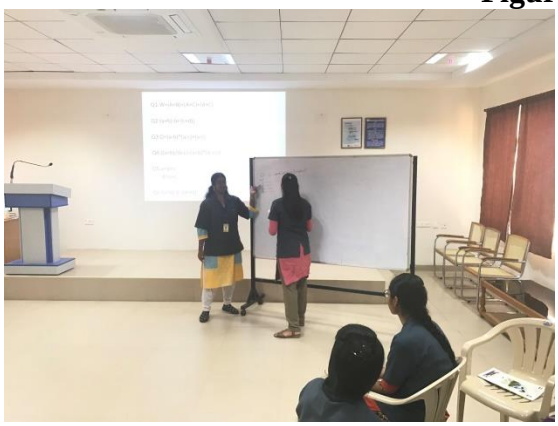

Figure 5

Outcomes:

- This activity increased attentiveness in the class and also improves the students' skill of critical analysis of the topics.
- This activity made the students to understand the topic clearly.

Relevance to POs

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
04	3	2	3					1	2	2		3

Reflective Critique:

Challenges

- Some students are not interested to participate in the activity.
- Students found the activity helpful to get clarity on the topic especially when they combine and discuss.

Initiatives to address the problem:

- Several university questions were shown and discussed to the students about the weightage for simple code generation.
- Make the students to know the impact and importance of sharing their views and understanding related to the topic and made them involve in the activity.

Post-implementation

- Students were actively participated in this activity.
- From this activity, the students can get more clarity in the Simple code Generation by discussing and sharing their views with the other students in the class.
- The various representations of the Simple code Generation were again explained for their better understanding.

References:

https://www.ritrjpm.ac.in/images/computer-science/28.CS8501_ColloborativeLearning.pdf
https://www.ritrjpm.ac.in/images/computer-science/30_CS8591_Conceptcloning.pdf