HARNESSING TECHNOLOGY

Objective:

Engineering students benefit from an active and interactive classroom environment where they can be guided through the problem solving process.

Typically faculty members spend most of the class time to solve problems, apply the knowledge and doing the activities to gain more information.

Introduction:

Redefining quality in engineering education through hybrid instruction by Paul S. Peercy and Steven statements, in present education system it is very typical to engage the students in learning process. Why because student can get the information from many recourses which are available on internet.

One of the suggestion given by many of authors is, use of flipped classroom. Flipped classroom technique is a wonderful technique, a pedagogical model where the students get prepared before coming to the class. Flipped class room promotes active involvement of students during the class time. Class time can be utilized for conducting many activities like group discussions, quiz, collaboration activities etc.

Note: To make student attention, the duration of video/ppt lecture should be 10 to 15 minutes only.

Students can watch the video or ppt whenever they want. Most of the students re-watch the videos/ppt to understand difficult topics so that slow learners can be benefited. Flipped class room encourages faculty-student and student-student interaction in class time with the help of discussion forum.

Flipped class room is best suitable when we rush through syllabus and time taken to organize the learning activities.

Leaner's who are shy to ask the doubts and for the slow learners flipped class room is best choice, for this we can make a discussion forum on LMS so that every student can participate actively, they can post there quires and may get in-depth knowledge about the topic.

Reflection:

Before starting of this course I used to teach traditional teaching methodology. After reading authors papers I decided to implement flipped classroom.

I record video of my lecture which describes the concepts and methodology of process scheduling. What is mean by scheduling, what are the different types of scheduling algorithm and procedure of each algorithm?

For the students to watch this video I uploaded on YouTube and Course sites LMS.

I created the discussion forum to outline the differences between above mentioned scheduling algorithms and evaluate the waiting time, response time and through put for the given set of jobs.

As a result, Student should be able to understand the concepts and differentiate and compute the above mentioned parameters.

Remarks:

Initially i faced a problem with the following,

- Learning how to use LMS technology and how to instruct the student to utilize this LMS effectively.
- I spend a lot of time to create informative lectures to make the student attention during video watching.
- Making 10 to 15 minutes of quality video.
- Bringing the interest in students that the social media as an instructor tool.
- Preparing the transparent grading analyses.
- Whether all the students have watched the video in order to participate in active learning.

As the above mentioned last only initially, once the students got the importance of it, it would be an easy task.

Need to Learn:

How to use time effectively and which information has to be cover in the video and which related activities should be being conducted in classroom.

Engaging the students in face to face interaction in video watching is typical job

How to implement effective flipped classroom.

Summary:

Flipped classroom is wonderful technique to engage the students in active learning process and effective utilization of LMS and classroom time.

Proof:

Bb Blackboard Learn

https://www.coursesites.com/webapps/portal/frameset.jsp?url=%2Fwebapps%2Fblackboard

Search

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Control Panel

- Content Collection
- Course Tools
- Evaluation
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- Packages and Utilities
- Help

use of DLL

Attached Files: Assigenement.docx (97.078 KB)

Question : Construct a C#.net Program to use DLL of one Project in another Project

Instructions:

Program should be specific to the question

finite stpes

logically and syntactically corect

Meaning full Application

Program should be executable

.Net survey

Discussion Board

https://www.coursesites.com/webapps/blackboard/content/launchAssessment.jsp?course_id=_457986_1&content_id=_11054941_1&mode=cpview&target=blank

start   Module4 Assignement...   Blackboard Learn - M...   4:54 PM

Course title : SOFTWARE TESTING

Topic : PATH TESTING

Activity: **Think---Aloud Pair Problem Solving (TAPPS)**

Time Allocation: 15min

What question will you ask the students?

Apply path testing on given flow chart? And find out bugs?

Example of a Data Flow Graph
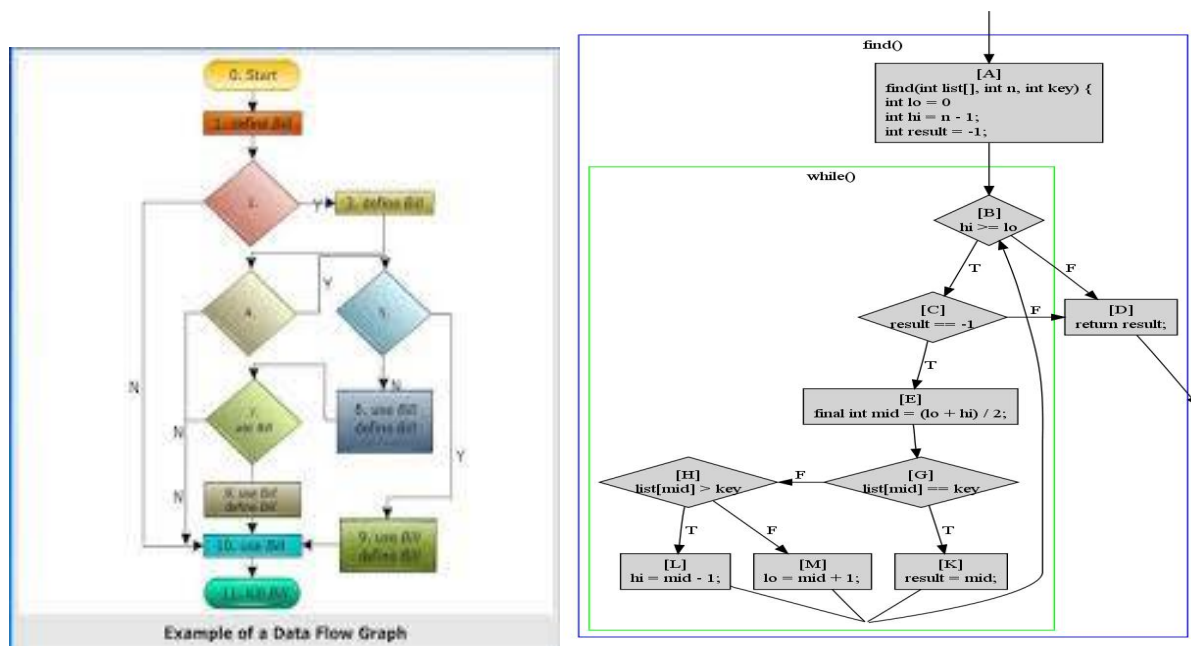
Details of implementation:

In the class I asked students to form teams of size 2 member's total 25 teams.

In each team one should act as solver and another one act as listener .for the first problem.

And for second problem solver should act as listener. And listener should act as a solver.

- **Pre-implementation reflection:**

  What do you think will work well and what challenges do you anticipate?

  While a student is solving a problem if he get any doubt students may not feel free to discuss with faculty. But he can freely take suggestions from his team mate to solve the problems. with this activity all students will learn how to solve the problems with the help of others.

Challenges I may anticipate is that:

Time management slow learners are taking more time to solve the problem. And the students are not getting solution immediately they not trying for alternative solution. When the students struck to solve even learner is also not able to suggest. Learners interrupting the solver he is not giving time to solve the problem.

How will you address those challenges during the class?

To provide alternative solution I have given some hints. Intimated all the listeners to just listen patiently.

Post-implementation reflection:

What worked well?

Most of the students ware solved the problem with the help of learner. With this activity all the students know how to solve the problems finally.

What were the challenges?

Time management is the main challenge.

Students are not searching for alternative solution when they struck.

How would you improve the lesson next time?

For the next time I come to know whether the all students know at least one type of solution for problem or not then only I will conduct this activity.

Collaborative Learning

5.1Activity implemented in the class:

1. The activity that I was conducted in the lab is **Student teams-achievement divisions** (STAD).were group and each student assessment is done.

   First step is to create teams: lab duration was 2 hr. so first 40 min I was discussed the topic for which I am going to conduct the activity. Then I was explained the creation of multiple activities for mobile application development.
   And I have created 20 teams each team contains 4 members.
   Out of 4 members 1 is designer, and 2 are for coding and 1 for debugging.

   What strategy and why?

   The strategy that I was fallowed for creating teams is first based on their interest and past observations in the lab and class that are those who are good in design part and some students are good in coding based on these observations I have created teams and assigned the roles in the team.

2. While collaborative work was going on the class, what specific steps did you take to

- **Keeps the discussion going amongst the team members**: first I asked the students to design multiple designs for the given application and select the best design? While designing students are designing and coding and debugging students were ideal so I encouraged them to involve the design part such that

coding part debugging task is easy. And also asked the students to prepare alternative solutions for all the designs.

- **Motivate non participating members:** I have motivated the non participating student by giving simple task and some hints related to the team activity. If some students are not able to understand then I showed some examples to involve them in the activity.
- **Open a deadlock:** I have observed 1 team completely misunderstand the given problem. So for them I have explained the problem again.

Another team completely moving I wrong way for them I have given some hints to understand the right way.

And a team is not able to start the activity they have some ambiguity. For them I showed some examples.

3.1. Give a team-wise score of the class in a tabular form.

The activity was conducted for 20 marks.
10 for implementations.
5 for designing
5 for debugging

Team Number	Number of students	Assessment for a group	Team Performed less than median score (yes/no)	One most important reason for team's performance
1	4	14	NO	All are performed well and good communication in team. But they not implemented within time
2	4	15	NO	All are performed well , and missed some test cases to satisfy
3	4	14	NO	All are performed well, and good communication in team debugging was not done within time
4	4	16	NO	All are

				performed well and good communication in team but they missed final test case.
5	4	17	NO	All are performed well. But missed finishing
6	4	13	YES	Not satisfied the problem statement
7	4	12	YES	Design part not satisfied the problem statement
8	4	9	YES	Design part is completed but not implemented the design. Lack in coding
9	4	9	YES	Design part is completed but not implemented the design. Lack in coding
10	4	10	YES	Lack in coding not implemented the application
11	4	12	YES	Design part was good but they satisfied only one test case of implementation
12	4	14	NO	Design part is completed but not implemented the design completely.
13	4	14	NO	Design and implementation was good but not satisfied all test cases.
14	4	13	YES	Design part is

				completed but implementation was not done within time.
15	4	15	NO	Design and implementation was good and lack in team work.
16	4	10	YES	Design part is completed but not implemented the design. Lack in coding
17	5	9	YES	Not understood the problem statement and all team members are not involved in the activity.
18	5	12	YES	Design part is completed but not implemented the design. Lack in coding
19	5	14	NO	Not satisfied the given test cases.
20	5	15	NO	80% of implementation was completed.

What was the median score? : The median score was 13.

Individual Assessment for 10 marks. (5*2=10)

1. **How to create object for Intent class**
2. **Parameters required for Intent class**
3. **How to start the next activity.**
4. **How to pass information from one activity to another activity**
5. **Differences between getExtras() and putExtras()**

4. Since the teams were heterogeneous, ideally all the teams should have secured a score equal to the median score. This does not happen however. Can you give one most important reason for each team scoring less than the median score of the class and one most important reason why some teams outperformed?

9	4	9	YES	Design part is completed but not implemented the design. Lack in coding. Not have good communication in the team
17	5	9	YES	Not understood the problem statement and all team members are not involved in the activity.
6	4	13	YES	Not satisfied the problem statement.
5	4	17	NO	All are performed well. But missed finishing.

Collaborative Assessment:

Rubrics for Formative Assessment for a Group: 13 Marks

Team Number	Number of students	Team Score (Median Score =)	Average Assessment
1	6	11	0.846154
2	6	12	0.923077
3	6	9	0.692308
4	6	10	0.769231
5	6	12	0.923077
6	6	9	0.692308
7	6	8	0.615385
8	6	10	0.769231
9	5	11	0.846154
10	5	11	0.846154

Max score = 12 Median =10.3

Rubrics for Summative Assessment for a Group: 17 Marks

Team Number	Number of students	Team Score (Median Score =)	Average Assessment
1	6	16	0.94117
2	6	14	0.82352
3	6	11	0.647
4	6	13	0.7647
5	6	14	0.82352
6	6	13	0.7647
7	6	10	0.5882
8	6	9	0.5294
9	5	14	0.82352
10	5	16	0.94117

Max Score = 16, Median=13

Rubrics for Formative Assessment for an Individual in a group(Average): 13 Marks

Team Number	Number of students	Team Score (Median Score =)	Average Assessment
1	6	9	0.69
2	6	10	0.76
3	6	9	0.69
4	6	9	0.69
5	6	11	0.846
6	6	10	0.76
7	6	8	0.615
8	6	9	0.69
9	5	10	0.76
10	5	10	0.76

Max Score=10, Median score=9.5

Rubrics for Summative Assessment for an Individual: This assessment will be done at the end of the Activity, to check whether the objectives are met: Marks : 15

Team Number	Number of students	Team Score (Median Score =)	Average Assessment
1	6	12	0.8
2	6	10	0.666
3	6	9	0.6
4	6	10	0.666
5	6	12	0.8
6	6	13	0.866
7	6	9	0.6
8	6	9	0.6
9	5	12	0.8
10	5	13	0.866

Max Score=13, Median score=10.9

Overall Performance:

Team Number	Number of students	Average Formative Assessment for a group (13 marks)	Average Summative Assessment for a group (17 marks)	Average Formative Assessment for an Individual (13 marks)	Average Summative Assessment for an Individual (15 Marks)	Team Score (Median Score =) 10.925	Team Performed less than median score (yes/no)	One most important reason for team's performance
1	6	11	16	9	12	12	Yes	Good Communication in Team
2	6	12	14	10	10	11.5	Yes	Logical Thinking was good in this team
3	6	9	11	9	9	9.5	No	2 members were not communicating in the team, they were irregular students, so it affected the team score
4	6	10	13	9	10	10.5	No	Good, but missed few problem statement requirements, so secured less marks
5	6	12	14	11	12	12.25	Yes	Very good communication between students
6	6	9	13	10	13	11.25	Yes	good communication between students
7	6	8	10	8	9	8.75	No	Lack of understanding Problem statement which effected their

								entire solution
8	6	10	9	9	9	9.25	No	This team also missed few important requirements for problem statement, so affected their marks
9	5	11	14	10	12	11.75	Yes	The solution proposed was good, much importance was given to logical coding
10	5	11	16	10	13	12.5	Yes	Good and also logical coding was written

2. What was the median score? : The median score was 10.925

3. Since the teams were heterogeneous, ideally all the teams should have secured a score equal to the median score. This does not happen however. Can you give one most important reason for each team scoring less than the median score of the class and one most important reason why some teams outperformed?

Sl.No	Team Number	Reason for each team scoring less than the median score
1	3	2 members were not communicating in the team, they were irregular students, so it affected the team score
2	4	The students in the team were performing well, but missed few problem statement requirements, so secured less marks
3	7	Lack of understanding Problem statement which effected their entire solution
4	8	This team also missed few important requirements for problem statement, so affected their marks