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Perception of Students on Student-Centered Learning Activities as Implemented in Class Sessions

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Abstract — Student-centered learning is geared towards greater involvement of students in the learning process. In this approach, the teacher simply acts as a facilitator while students are given a free hand to explore, interact, express, discover, share, reason out and learn things away from the usual teacher-lectured class discussion. For this study, the Critical Thinking approach as a student-centered activity is used by the lecturers in all Probability and Statistics classes on a selected topic as pre-defined in the Course Delivery Plan, "mostly" positive reactions from students towards this innovative activity as conducted in class were observed, and such claim is strengthened by the students' feedback results along with interviews conducted on randomly selected student-respondents.

Keyword—Student-Centered Learning (SCL), Course Learning Outcomes (CLO)

I. INTRODUCTION

SCL is geared towards greater involvement of students in the learning process. In this approach, the teacher simply acts as a facilitator while students are given a free hand to explore, interact, express, discover, share, reason out and learn things away from the usual teacher-lectured class discussion [12]. The term itself suggests that the learners get the center stage of the learning process, and the teacher's presence is required for a proper guidance and a validation of students' ideas that may spring up during specific activities. A wide variety of approaches and strategies may be used in class taking, consideration of the learning needs, cultural backgrounds, academic settings, and other educational factors for students individually or in groups that best fit the educational purpose [7]. Various researches and articles are out and strongly support the effectiveness of student-centered learning to reap better results in life-long education and learner's experience [13]. For the current paper, the authors wished to note that SCL activity is literally implemented in class to support the defined CLO for the pre-selected course. Specifically, this study is aimed to look through the perception and experience of students on SCL as implemented in class.

II. MATERIALS AND METHODS

Qualitative research method is deployed in this work which purports to describe specific situation using research tools like: interview, survey etc in detail. Authors are so eager to elicit insights from the respondents and would be used as a basis for decision making in related endeavors. More specifically, SCL activities were conducted in four sections of Probability and Statistics course with a total of 73 students for Semester II Academic Year 2016-2017 as pre-defined in the Course Delivery Plan. Critical thinking approach was used in each session. Several groups of students were formed, a paper of scenario-based problems were prepared and distributed to each group to read, analyze and solve. Group discussions followed suit as solution for each problem is sought. Doubt and confusion came as expected and the respective teachers readily lent the necessary guidance and led towards the achievement of goal.

SCL Student Feedback form from Quality Assurance Unit of Shinas College of Technology was floated to student-respondents to evaluate how SCL activities are perceived. Ten different items are listed in the forms which are rated from 1 to 5, with 5 as the highest mark. Marks were tallied and averages of each item, along with the total average, were presented in the analysis of data. Quality Assurance Unit marking criteria is used to describe each average. Also, personal interviews were conducted at random to 4 selected respondents for each category namely excellent, average, and weak (a total of 12). Total of assessment marks are used to determine the label of respondents. Individual responses were recorded and acknowledgement of signature was required right after the process. Further, responses were presented and used in the analysis of this study.

III. ANALYSIS

After conducting a careful analysis on the survey forms of the **STUDENT'S FEEDBACK ON SCL** responded by 73 students of Bachelor Level, as been floated on the 2nd Semester AY 2016-2017, these are the subsequent findings:

Overall Average **4.21** **(Very Good)** With Ten (10) assessment items, considered thereof, respondents gave an Overall average mark of **4.21** equivalent to a descriptive rating of **"Very Good"**. One (1) Assessment Item received **'Excellent",** Eight (8) received "**Very Good**" score, One (1) Assessment Item got contended with "**Good**" rating. Item 5 (The teacher encourages student communication and contribution for every concept taught) garnered the highest mark at **4.51** while Item 10 (All the SCL activities designed were correlated with the defined Course Learning Outcomes) received the lowest score of **3.94.**

Table 2 shows interview responses of 12 students randomly selected from the four groups of Probability and Statistics:

1. All four respondents of the excellent category accepted that the SCL Activity has helped them in gaining the knowledge, and skills with which they can solve any critical thinking problems.
2. 3 out of 4 members in the average category said that they were able to solve the problems of high levels, and teachers are readily helping them to gain the right knowledge; except for one student, who did not appreciate the purpose of the activity

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3. All the four students of the weak category felt it was easy to solve the problems when done in groups, which makes them to improve their knowledge and exchange information in the subject and wanting for more exercise to be solved by this method.
4. 11 out of 12 selected respondents confirmed that (91.7%) SCL activity planned by the teacher, has helped them to improve confidence, gain knowledge and perform well in the assessments.

Table1: Analysis of Student Feedback on SCL

S.No	Assessment Items	Rating	Remarks
1	I am informed about the course learning outcomes and am aware of the course delivery plan.	4.36	**Very Good**
2	Use of innovative teaching methods has helped me in understanding the concepts better.	4.08	**Very Good**
3	The teacher has planned various activities that encourage my interest and participation.	4.26	**Very Good**
4	The activities planned by my teacher have helped me improve my confidence and perform well in assessments.	4.28	**Very Good**
5	The teacher encourages student communication and contribution for every concept taught.	4.51	**Excellent**
6	The teacher is approachable and always gives constructive feedback on any doubts or issues raised.	4.25	**Very Good**
7	The SCL approach has made me more focused and responsible.	4.17	**Very Good**
8	The SCL approach has enabled me to think critically, to acquire the reading habit and a continuous thirst for knowledge.	4.00	**Very Good**
9	The SCL approach has enabled me to study and learn anytime from anywhere.	4.24	**Very Good**
10	All SCL activities designed are correlated with the defined CLO.	3.94	**Good**

Table 2: Interview Report

Student	Comments	Category	Rating
Excellent Student	In my point of view, this is a way of learning any mathematical concepts which is based on practicing/solving more scenario problems to understand the rules clearly, and writing the exams well	**Positive**	**4/4 or 100 %**
	It helps to absorb the explanation and to get the information very easily	**Positive**	
	Let student answer the questions and answer it collaboratively in the class daily class	**Positive**	
	It is good and helpful to us to get new ideas to solve	**Positive**	
Average Student	It gives me more practice of solving problems. Also, it helps me to understand more and know how I solve problems. The SCL give me more information about the lectures how we can solve the high level problems	**Positive**	**¾ Or 75%**
	That exercise improve our thinking and knowledge for the exams, it suited students level and very helpful, make students think better and practice on difficult questions	**Positive**	
	However there are many reasons, and one of the most reasons is that it can help the student in increasing the knowledge	**Positive**	
	For the activities, you should care about the level of the students in the class	**Negative**	
Weak Student	It is good job because it is helping us to solve the problems and see our mistakes before us, the question we tried to solve the problems and then we can check our answers, so it is a good movement from the lecturer to help the students	**Positive**	**4/4 or 100 %**
Weak Student	It helped me to solve different ideas exercise of probability, and exam in short time.	**Positive**	
	Yet more exercise are needed to solve	**Positive**	
	Teacher is keen to see and check the solution of the problems. It make easy to study and it save time for memorizing the complex ideas	**Positive**	

Total: 11/12 or 91.7%

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IV. CONCLUSIONS

After analyzing the data gathered the following points are concluded, Informing about the course learning outcomes makes the students aware of the course and the delivery plan. Uses of innovative teaching methods help students in understanding the concepts better. The teacher can plan various activities that encourage student's interest and participation. Activities planned by the teacher will help the student to improve his/her confidence and perform well in assessments. The teacher's encouragement enables the student to communicate and contribute for every concept taught. The teacher is approachable and always gives constructive feedback on any doubts or issues raised by the student. The SCL approach makes the student more focused and responsible. The SCL approach will help the student to think critically, to acquire the reading habit and a continuous thirst for knowledge. The SCL approach enables the student to study and learn at anytime from anywhere. All SCL activities designed are correlated with the defined CLO. Majority, if not all, of the students see the positive effect of SCL activities in their study.

Recommendations

Based on the conclusions, these points are hereby recommended:

a) Implementing SCL activities in the class session.
b) The activities planned by the teacher should help the student to understand the concept better, encouraging the student to participate and improve the performance of the students in the assessments.
c) According to the level of students, the activities should be planned.
d) Teachers must allow students to explore and interact in the SCL but always be ready to intervene once confusion arises.
e) Other researchers must conduct similar studies related to SCL and to further validate the claims of this study.

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