

Formative Assessment And Quality-Circles To Improve Student's Involvement And Course Quality In Effective Thoughtful Of Electronic Commerce Subject

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ABSTRACT

The goal of Quality Circles and formative-assessment is to observe student learning to provide on-going feedback that can be used by instructors/faculty to get better their teaching and by student's to improve their learning E-commerce course effectively. QC-Quality circles in the classroom setting are composed of students who meet regularly to identify, analyze and solve queries related to an E-commerce course. We instituted Quality circles (QCs) among Post graduate students (MCA) and evaluated their impact on quality of learning and student satisfaction. Our result shows that the use of Quality Circles (QCs) with formative assessment in master of Computer Applications student's improves quality of learning and student satisfaction.

Keywords: Quality Circles, Quality Circles Team, Formative Assessment, Methods, Results

I. INTRODUCTION

The objective of Formative Assessment is to observe student learning to provide on-going feedback that can be used by instructors and faculty to improve their teaching and by students to improve their learning. More specifically, Formative Assessments: It helps students to recognize their strengths and weakness and target areas that need work hard. It helps faculties to recognize where students are struggling and address problems instantly. Using formative feedback as a teaching method means that a

classroom becomes the locus of ongoing dialogue that helps students measure and improve as they work to meet goals, expectations, and objectives. The instructor takes in information about student progress and understanding, which creates the opportunity for a feedback loop that the instructor can use to shape teaching. It is the moment when student progress shapes instruction that formative feedback becomes formative assessment.

Quality Circle: A Quality Circle is a group of students who are the same course students, who get together regularly to recognize, examine and solve some subject related problems. The operation of Quality Circles involves a set of sequence steps as under: Problem identification, Problem Selection, Problem Analysis, Generate alternative solutions, Select the most appropriate solution, Prepare plan of action, Implement the Solution with discussions with seniors.

2. RELATED WORK

“Blended e-Assessment-e-assessment solution that supports both teachers evaluating and students accessing and reviewing their assessments on line, anytime and anywhere. Students perform their tests, exams or exercises in paper, but the assessment made by teachers and reporting of results to students is performed on-line using scanned copies of the papers. Teachers can send general or specific feedback to learners and use predefined prompts in order to initiate student self-reflection and self-awareness of their mistakes and misconceptions.”[1]

“Educational peer assessment has proven to be a powerful approach for providing students timely feedback and allowing them to help and learn from each other. In an educational setting, most peer assessment consists of a single round.”[2]

“The application of formative assessment in ESP-English for Specific Purposes which is composed of two parts, namely, online learning activities and offline learning activities with different emphasis on the language abilities intended to cultivate. By doing so, students are advised to lay emphasis on the learning process.”[3]

“Students learning can be tremendously affected by the way they will be assessed. Author discussed presents the results of a didactical implementation combining different kind of assessments during the semester conjoined by cared teacher mediation, which engaged students to work on a weekly basis using teachers' feedback to progress in their learning. Correlations between students perceptions,

students participation and students results are discussed. Several significant correlations were found giving support to the coherence between students formative and summative assessment design.”[4]

“Discussion on independent open learner model for formative assessment and learning analytics based on developments in technology use in learning, also maintaining more traditional numerical and qualitative feedback options.”[5]

Student Feedback Committee provide a continuous and active feedback method for the teaching group, a beneficial experience for the SFC members, and an opportunity for class member to confidentially share their input to improve the quality of the course throughout the semester. Based on our experience, we strongly recommend implementing the classroom quality circle for increasing course quality.[6]. The basic structure and fundamentals of Quality Circles have remained the same irrespective of factors like time, place, type of organization, size of organization, etc...” [7]

“Higher education should be judged by the extent to which it: (1) gives students the confidence and ability to take responsibility for their own continuing personal and professional development; (2) Prepares students to be personally effective within the circumstances of their lives and work; and (3) Promote the pursuit of excellence in the development, acquisition and application of knowledge and skills.”[8]

“Students quality circle comprise a set of students that form a “committee” (voluntary) with the purpose of having Quality in Teaching and Learning by meeting each other and also ensures the presence of the instructor regularly (Once in 15 days or once in a month). With Mutual collaborative approach, frank discussions are encouraged, consequently problems are resolved, expectations of students and faculty are matched and it also paves the way for cordial learning environment.”[9]

“Quality circle goes well beyond the campus as it stimulates extracurricular activities among students which lays emphasis on cultivating leadership qualities, initiative, teamwork spirit, creativity, innovation, confidence, and building up problem- solving mechanism etc. Indeed these are the basic soft skills which the industries look for. Its purpose is to facilitate learning, academic and extracurricular activities by honing knowledge and soft skills among students. Feedback from the students, a part of student quality circle.”[10]

“Quality circle is a participatory management technique used to solve the quality related problems by involving the employees in industries. Now-a-days the concepts of Quality circle have been implemented in educational institutions to improve the academic performance. Although exhaustive researches are conducted to implement quality circle concepts in educational institutions, many challenges still remain to be solved. The study revealed that implementation of quality circle concepts improved the involvement of students in the teaching-learning process, active learning and academic performance by 20 to 30 %.”[11]

“Quality circles in the classroom setting are composed of students who meet regularly to identify, analyse and solve problems related to a course, and implement solutions. We recently instituted quality circles (QCs) among preclinical medical students and evaluated their impact on quality of learning and student satisfaction.”[12]

Assessment	Formative Assessment
Period	At the time of running course, Teaching and learning activity
objective	For improving Teaching and learning quality
Feedback	Return to material
Frame of Reference	Always measure (evaluate students according to the same criterion)

The following parameters are very useful to make formative assessment for E-Commerce course: Observations, Questioning, Discussion, Exit/Admit Slips, Learning/Response Logs, Graphic Organizers, Self Assessments, Activity based Learning, Practice Presentations, Visual Representations, Four Corners (A B C D - Fifteen student each), Constructive Quizzes, Think Pair Share, Appointment Clock,

3. METHODS

Included in the study were all 60 Master of Computer Applications Students have taken E-Commerce Course in the year 2016. Out of Sixty students initially 6 students were selected randomly for QCs team members. And randomly changing every meeting QCs team members. The QCs team was met before and after Internal tests. They discussed E-Commerce related problems, Teaching learning problems and Learning method lies. Then made report based on QCs feedback.

1. Initial Step 1:

We are taken one course “Electronic commerce” of Higher education students (MCA). We conducted Formative assessment. Taken feedback from 60 students they are studying MCA course.

The Course Outcomes are:

Students will be able to:

- Demonstrate the process of Electronic commerce and Business Models
- Exhibit the Process of e-Marketing and e-Payment Systems
- Describe e-Supply Chain Management and e-CRM and
- Demonstrate e-Strategy and Knowledge Management
- Describe the usage of Portals for E-Business
- Exemplify the Information Systems for Mobile Commerce and
- Demonstrate the use of E-Commerce Tools

After one month of the course, Faculty incharge taken Formative Assessment (feedback) -1 from the student through google forms it is shown below:

1.What are the most positive aspects of this teacher's practice that help you learn best?(Check as many as apply) *

- Lectures
- Learning materials provided
- Examples

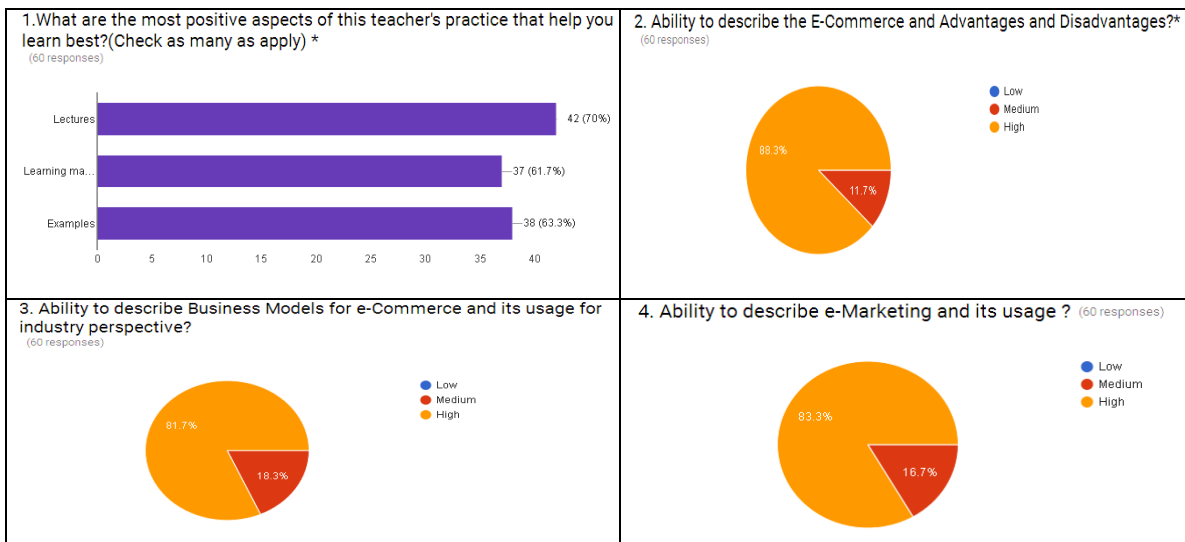
2. Ability to describe the E-Commerce and Advantages and Disadvantages?*

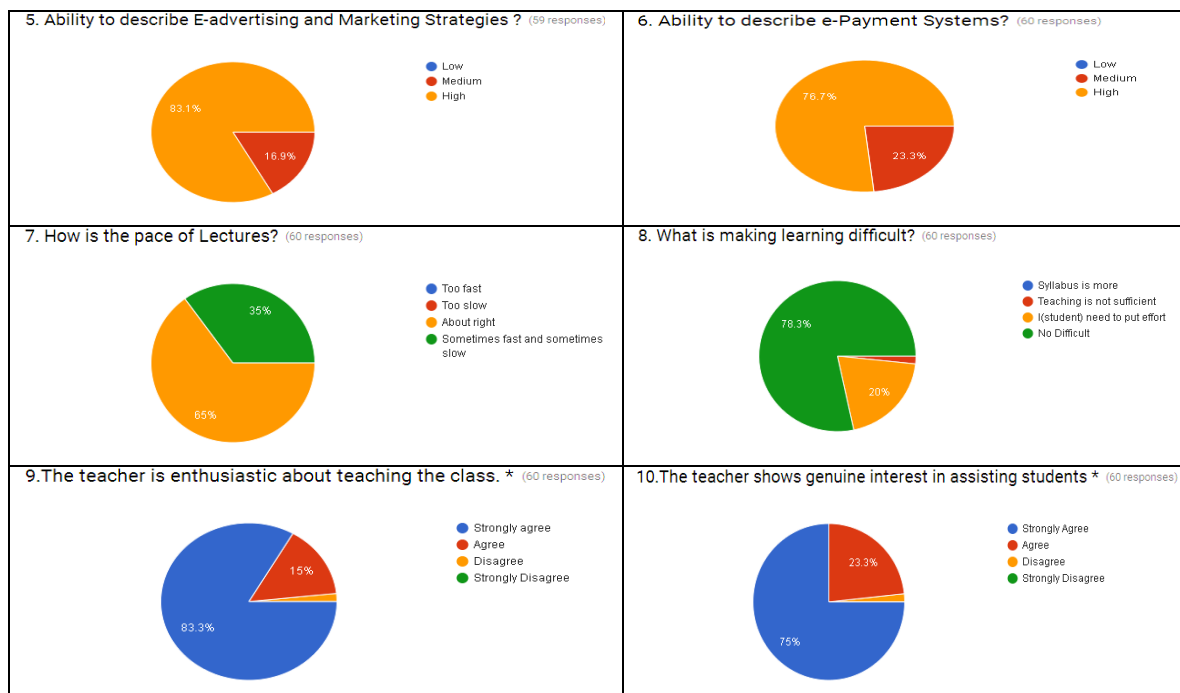
- Low
- Medium

<ul style="list-style-type: none"><input type="radio"/> High
<p>3. Ability to describe Business Models for e-Commerce and its usage for industry perspective?</p> <ul style="list-style-type: none"><input type="radio"/> Low<input type="radio"/> Medium<input type="radio"/> High
<p>4. Ability to describe e-Marketing and its usage ?</p> <ul style="list-style-type: none"><input type="radio"/> Low<input type="radio"/> Medium<input type="radio"/> High
<p>5. Ability to describe E-advertising and Marketing Strategies ?</p> <ul style="list-style-type: none"><input type="radio"/> Low<input type="radio"/> Medium<input type="radio"/> High
<p>6. Ability to describe e-Payment Systems?</p> <ul style="list-style-type: none"><input type="radio"/> Low<input type="radio"/> Medium<input type="radio"/> High
<p>7. How is the pace of Lectures?</p> <ul style="list-style-type: none"><input type="radio"/> Too fast<input type="radio"/> Too slow<input type="radio"/> About right<input type="radio"/> Sometimes fast and sometimes slow
<p>8. What is making learning difficult?</p> <ul style="list-style-type: none"><input type="radio"/> Syllabus is more

<ul style="list-style-type: none"> ○ Teaching is not sufficient ○ I(student) need to put effort ○ No Difficult
<p>9.The teacher is enthusiastic about teaching the class. *</p> <ul style="list-style-type: none"> ○ Strongly agree ○ Agree ○ Disagree ○ Strongly Disagree
<p>10.The teacher shows genuine interest in assisting students *</p> <ul style="list-style-type: none"> ○ Strongly Agree ○ Agree ○ Disagree ○ Strongly Disagree

Feedback from the students:





After taking feedback from the students, we formed Quality Circles Team (QCs). It contains out of 60 students we selected 6 students in same course. Six students were selected randomly for these QCs. Circle participants met once in a month after every internals for 15 - 45-minute sessions to discuss Teaching and learning methods and course related issues and course outcome and prepare a report and submitted to Head of the department. After getting feedback from the QC team faculty incharge followed following Teaching methods:

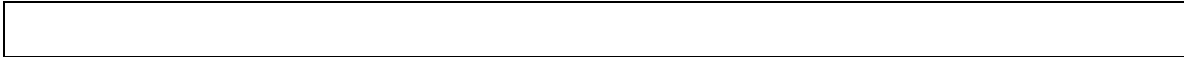
- Blackboard with using Powerpoint presentation
- Activity Base leaning in the class room -based on Retail process
- Discussing Real time examples using Flipkart, Amazon, eBay etc business process
- Making 15 Members one team like A B C D and assigned course related topic discussion in the class room.
- Asking Questionnaires between Teams A B C D

2. Step 2 :

Second month of the course, Faculty incharge taken formative assessment (feedback)² from the student through google forms it is shown below:

MCAE29: E-Commerce and M-Commerce
<p>Dear student please take few minutes to fill up the form Formative Assessment-2 MCAE29 E-Commerce and M-Commerce Dear Student,</p> <p>Please use this questionnaire as a constructive way to provide feedback to your teacher about his/her teaching & learning process. Please think through your comments to be as specific as possible so that your teacher can determine what steps to take to make his/her teaching & learning process more effective for you. Your answers to this questionnaire should be returned to your teacher and will be seen only by your teacher.</p> <p>Course Code: MCAE29 Course Name: MCAE29 E-Commerce and M-Commerce. V Semester</p>
<p>1.What are the most positive aspects of this teacher's practice that help you learn. (Check as many as apply) *</p> <ul style="list-style-type: none">▪ Lectures▪ Learning materials provided▪ Activity Based Learning▪ Examples
<p>2. Ability to describe the Credit Card Authorization Process</p> <ul style="list-style-type: none">○ High○ Medium○ Low
<p>3. Ability to describe Digital Payment Requirements</p> <ul style="list-style-type: none">○ High○ Medium○ Low

<p>4. Ability to describe Designing e-payment Systems</p> <ul style="list-style-type: none"><input type="radio"/> High<input type="radio"/> Medium<input type="radio"/> Low
<p>5. Ability to describe E-CRM Solutions</p> <ul style="list-style-type: none"><input type="radio"/> High<input type="radio"/> Medium<input type="radio"/> Low
<p>6. Ability to describe How Technology Can Help in e-Customer Relationship Management?</p> <ul style="list-style-type: none"><input type="radio"/> High<input type="radio"/> Medium<input type="radio"/> Low
<p>7. How is the pace of Lectures?</p> <ul style="list-style-type: none"><input type="radio"/> About right<input type="radio"/> Too slow<input type="radio"/> Too fast<input type="radio"/> Sometimes fast and sometimes slow
<p>8.The teacher is enthusiastic about teaching the class</p> <ul style="list-style-type: none"><input type="radio"/> Strongly agree<input type="radio"/> Agree<input type="radio"/> Disagree
<p>9.The teacher shows genuine interest in assisting students *</p> <ul style="list-style-type: none"><input type="radio"/> Strongly agree<input type="radio"/> Agree<input type="radio"/> Disagree



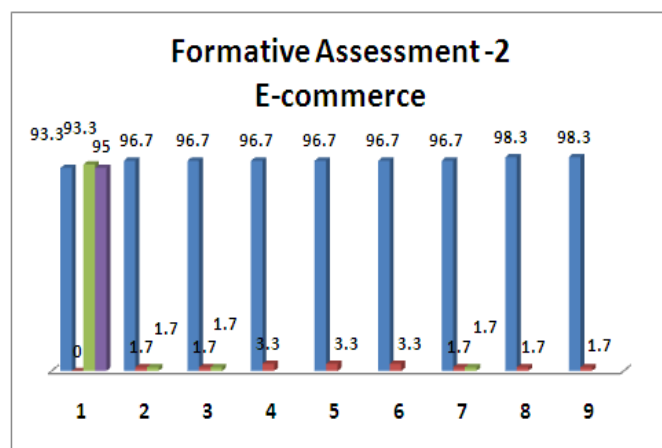
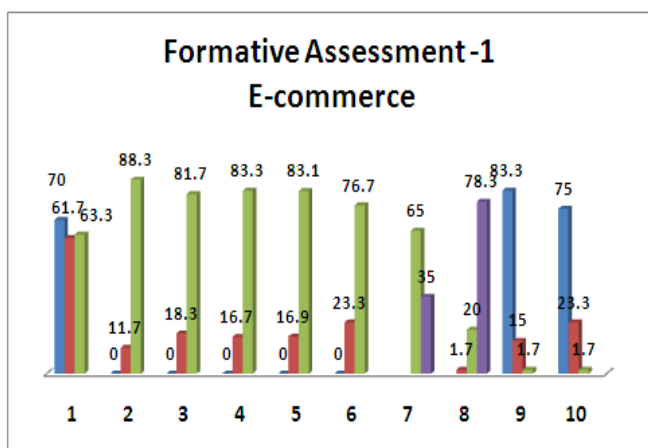
Collected feedback from the students:



Analysis of Formative Assessment 1 and 2

4 RESULTS

A total of 6 meetings were held between one semester for MCA course. In these results analysis showing that we were collected total 60 student’s feedback from various questions as per course outcomes. 100% students gave feedback through google form. Identified student level understands the course and issues in the subject and collected feedback from the students (QCs).



In the first Formative assessment learning methodologies: Lectures- 70%, Learning materials provided - 61.7%, Examples -63.3% with black board.

In second Formative assessment- Learning methodologies: Lectures- 93%, Activity Based, Learning-93.3 %, Examples- 95%.

In the first Formative assessment students understanding overall rate of percentage: 81.6%,

In the Second Formative assessment students understanding overall rate of percentage: 96.7%

In the first Formative Assessment Teaching and assisting overall percentage: 75.4%

In the second Formative Assessment Teaching and assisting overall percentage: 97.7%

In addition to enhancing quality of learning, quality circles improved student satisfaction as well. More studies should be conducted to test the impact of QCs on education in different settings and different activity based and real time example with digital board classes. Our results show that the use of quality circles in MCA E-Commerce course students improves quality of learning and student satisfaction.

In the year 2019-2020 academic year students during Pandemic they are showing interest towards implementation of free ecommerce websites with the support of affiliate programs and google sites.

5. CONCLUSION

The goal of Quality Circles and Formative Assessment is to observe students learning to provide ongoing Feedback that can be used by instructor to improve their teaching and by students to improve their learning Electronic commerce course effectively. The study produced major improvements. Student's problems solved. Students became more motivated and involved in their education and concentrated on learning course. Because of QCs team overall we observed improvements from 75% to 98%. We are concluding that forming QCs team and conducting activity based learning in E-commerce course is good for better quality result. Also should provide real time example using free open source technical facilities.

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