

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/305471765>

# Innovative and interactive teaching methods for improving learning quality in higher education

Conference Paper · August 2016

CITATIONS

6

READS

4,774

2 authors:



**Samantha Wickramasinghe**

Horizon Campus

25 PUBLICATIONS 11 CITATIONS

SEE PROFILE



**Gamage Nipuni Upeksha**

Horizon Campus

3 PUBLICATIONS 6 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Designed and maintaining a web based information portal for the Asia Pacific Region [View project](#)



Designed and maintaining a website of the Cap Net Lanka, Postgraduate Institute of Agriculture, University of Peradeniya in Sri Lanka [View project](#)

# **Innovative and interactive teaching methods for improving learning quality in higher education**

*Samanthi Wickramasinghe, G.N. Upeksha*

*Faculty of Information Technology*

*Horizon College of Business and Technology, Malabe, Sri Lanka*

*{samanthi,nipuni}@horizoncampus.edu.lk*

## **Abstract**

Teaching and learning are the two sides of a coin or it is a mirror image of each other. The most accepted criterion for measuring good teaching is the amount of student learning that occurs. There are consistently high correlations between students' ratings of the "amount learned" in the course and overall ratings of the teacher and the course.

Teachers use different teaching methods depending on the nature of subject, number of students, and the facilities available in the classroom. Lecture method, Group discussion, Individual presentation, Assignment, Seminars, Workshops, Role play and Case study are various common methods used in classroom teaching. Whereas in distance learning process, the teacher stayed in one location and provide notes & instructions and students learnt lessons by staying another convenient location as required. Internet generation students like to interact themselves in collaborative environment which facilitates the understanding and learning. Hence teacher centered teaching methods are obsolete and students prefer learner centered teaching methods. Many interactive technology including web based or internet based learning and teaching are the main feature of the learner centered teaching.

This paper illustrates the teaching methods can be used in classroom teaching and online teaching, students' perspective on teaching methods in both approach and effectiveness of these method.

**Keywords:** *Teaching Methods, Teaching and Learning Techniques, Learner centered teaching methods.*

## **Research Methodology**

The required data for the research was collected though a survey conducted among undergraduates in faculties of IT, and Management in Horizon Campus. Outcome of the survey is presented in the paper.

## **Data Collection**

Data collection restricted only to the innovative and interactive methods in traditional and online teaching and students selected from faculties of IT and Management due to restricted time.

## **Literature Review**

There are a number of traits required of the innovative lecturer which include humility, courage, impartiality, open-mindedness, empathy, enthusiasm, judgement and imagination (Hare, 1993). It is these lecturers who will infuse deeper learning in their students. Brockbank and McGill (1998) refer to reflective practice and learning and provide numerous examples of reflection in action by both academic staff and students. The focus must shift from 'talk and chalk' to how students learn and lecturers need to instill a deep approach to learning by giving students varied innovative stimulating learning environments in order to create a deeper learning. Learning should be the result of lecturer motivation and facilitation and the students' learning-focussed activities in which they are engaged and for which they assume ownership (Biggs, 1999). This is why it is imperative that all lecturers seriously engage in reflective practice and experiment with innovative methods where required.

They should strive to use personalised strategies to teach and actively engage learners in course content. Stensaker (2008) argues that in order to achieve quality teaching and learning, greater attention must be paid to teaching and learning practice. It is clear that traditional methodologies of 'talk and chalk' which are teacher centred are not adequate for current students and that effective teaching and learning is not taking place at the desired level (Race, 2003). High-quality learning outcomes are achievable provided that students assume greater control over their own learning (Boud, 1990). This notion is supported by Falchikov (1995) who maintains that greater student involvement in self-assessment and that of their peers is beneficial to them. Students must be immersed in authentic curriculum contents and tasks that are demanding and relevant to their lives and futures (Crosling et al., 2008).

## **Introduction**

### **Innovative and interactive methods in classroom teaching**

The practice or application of innovative and interactive teaching methods in educational institutions has the potential not only to improve the quality of education, but also to empower students or future generation of the country by strengthening governance and galvanize the effort to achieve the human development goal for the country.

### **Developing an effective and amazing Lectures**

Lectures can be bored to the students, if the lecturer is reading or talking in a monotone. This will be worse when you are reading PowerPoint slides while you are lecturing. This is not lecturing and it is simply death by PowerPoint. Preparing for a good and quality lecture is not that much easy and it is a time consuming task. If you as a lecturer are not enthusiastic about your teaching materials then your students will not be either.

First of all, you need to develop the lecture. You need to prepare for the lecture by reading, reading, and reading. Then only you can find new things related to the topic and you will become a subject experts on the respective area. Then you can do a good lecture and the students are the best people to give a feedback on your lecture and your preparation and organization indicate how confident you are in the subject matters.

Usually, a lecture should have a beginning, a middle, and an end. This is just the basic element of organization. At the beginning of the lecture if you can tell or put on the board or put on the slides the course objectives or the session outline would be good for the students. Then, can start the lecture with an attention-getting opening, such as by posing a question to the students. Even you can start the lecture by telling a story or real world example related to the topic that you are going to discuss by mentioning the most important concepts of the lecture and why these are important.

During your lecture, ask questions frequently to encourage students to speak up and to motivate them. Always make eye contact and talk to the students. Do not look outside or your lecture notes or PowerPoint slides while lecturing.

Conclude the lecture with a brief summary of the important points you made, and point out what they need to remember for the assignments and exam. Finally follow up the lecture with an in-class exercise or group activity. This gives students an opportunity to apply immediately what they learned.

There are nine (9) qualities identified of a great teacher/lecturer

1. Passion for the subject matter
2. Interested in student learning
3. Encourages students to express themselves
4. Seeks student commitment; calls them by name
5. Makes the subject matter relevant to “life”
6. Involves students in the subject matter
7. Flexible in the class; not afraid to deviate from the lesson plan to maintain student interest
8. Explains things multiple times in multiple ways
9. Cultivates independent thinking among students

There are different teaching methods used in the traditional classroom depending on the nature of subject, the facilities available and the number of students. Various teaching methods, tips and techniques for improving these methods are given below.

### **1. Lecture Method**

- It creates new ideas.
- It is good for large class.
- Teacher is experienced and has mastery on subject, explain all points and can answer all questions raised by students.
- Students can ask if they need any clarification.
- Learn through listening
- Teacher explains all points.
- Students give their input
- Teacher discuss whole topic in the class in easy language so students can easily understand the topic.
- It is good for large class.
- Teacher provides all knowledge related to topic.
- Time saving as teacher is supposed to finish lecture in time.
- Students give their views at the end of lecture.
- Students can ask question if they have any problem to understand lecture.

- Students attentively listen lecture and take notes as the teacher ask questions at the end of lecture.
- Students know and understand basic concepts.
- It creates new ideas.
- Teacher knows all the students so he/she can use suitable strategies for the class to make them understand.
- Teacher is experienced and has mastery on subject and can answer all questions by students.
- Teacher share information with students so it creates interest in students.
- Students are more involved and participate when teacher ask question.
- Teacher provides notes.
- Students easily understand every point.
- Students share knowledge with teacher.
- Teacher is role model for students.

## **2. Group discussion:**

- More participation of students.
- Students listen to other's opinion & express their opinion.
- Discuss with teachers the points that were missed during discussion.
- Students learn on their own & find out key points.
- Students exchange their ideas.
- Students get point of view of all and not only those who always speak.
- After discussion when students give their presentation, teacher corrects their mistakes.
- Students can make their own notes.
- The learning is more effective.
- They don't have to rely on rote learning.
- Develops creativity among students.
- It evokes thinking among students.
- Students have time for preparation of topic.
- Students should have material and knowledge before discussion. Suggestion
- Only those students participate who have confidence rest do not participate.
- Concepts become clear after discussion.
- Every student gives his/ her opinion.

## **3. Individual presentation**

- Students first thoroughly understand the topic before giving presentation i.e. mastery on topic.
- It increases confidence among students.
- Good way to learn for only one student who is presenting.
- Students search lot of books to collect material
- Teacher's supervision is important

## **4. Assignment**

- It enhances the ability of research on any topic as the students search topic from different books, websites etc.
- Active learning

### 5. Seminars

- Give Chance to meet other people of same profession.
- Motivate and make student active in learning.
- Interested method.

### 6. Workshops

- Give Chance to meet other people of same profession.

### 7. Role play

- Interesting method
- Creative thinking is encouraged.
- Students think beyond their knowledge.
- Students enjoy the situation
- Active learning
- Easy to learn

### 8. Case study

- Active learning
- Creative thinking is encouraged.
- Students think beyond their knowledge.

A questionnaire is prepared to obtain the students' perspective on different teaching methods (as mentioned in the above) are used in the traditional classroom and online teaching via Learning Management System (LMS) or Virtual Learning Environment (VLE).

Figures 1 and 2 clearly illustrating the comparison among students' perspective in faculties of IT and Management on teaching methods used in traditional classroom.

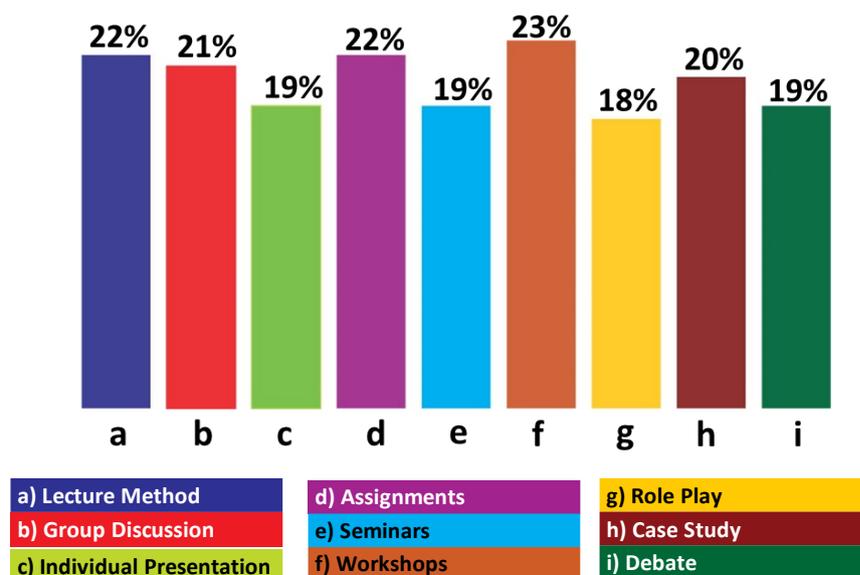


Figure 1- Faculty of IT students' perspective on teaching methods used in traditional classroom.

As indicated in figure 1, Lecture and Assignment methods show 22% and 19% respectively, interest to students in the faculty of IT. The other interested teaching methods are Individual Presentations, Seminars and Debate.

As shown in the figure 2, Group Discussion, Lecture Method, Workshops, Role Play, Assignment, Case Study, Seminar, Individual Presentations and Debate are the most interested to least interested teaching methods in traditional classroom in the faculty of Management.

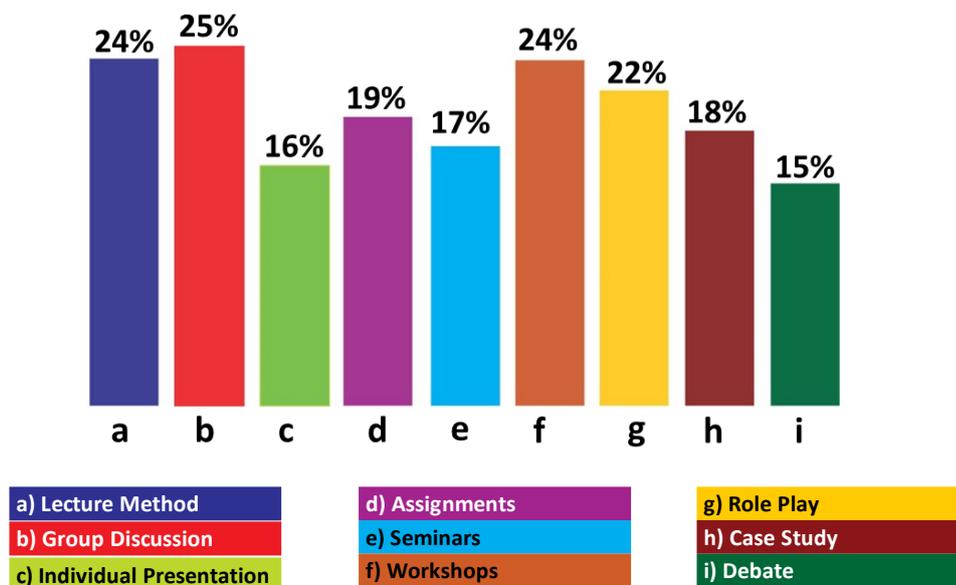


Figure 2 - Faculty of Management students' perspective on teaching methods used in traditional classroom.

Survey outcome clearly indicates that the workshop is the common accepted teaching method for both faculties of IT (23%) and Management (24%). Also Workshop is the most interested teaching methods of faculty of IT whereas Group Discussion is the most interested teaching methods of faculty of Management students which shows the overall ratings of 23% and 25%, respectively. Role Play teaching method is the least interested in faculty of IT which is having the rating of 18%. Debate is the least interested teaching method in faculty of Management with the rating of 15%.

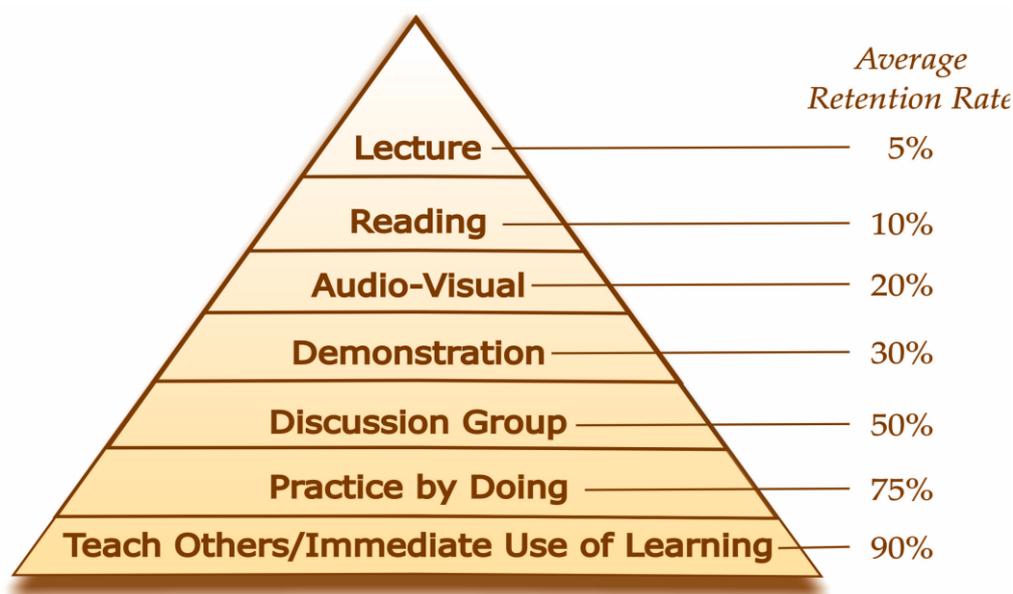


Figure 3- Learning Pyramid in traditional classroom.  
(Source: Adapted from National Training Laboratories. Bethel, Maine)

As illustrated in the figure 3 the average retention rate is high in Teach others/ Immediate use of learning, Practice of Doing, Discussion Group, and Demonstration, Audio Visual, Reading and Lecture are in the group of low average retention rate in traditional classroom.

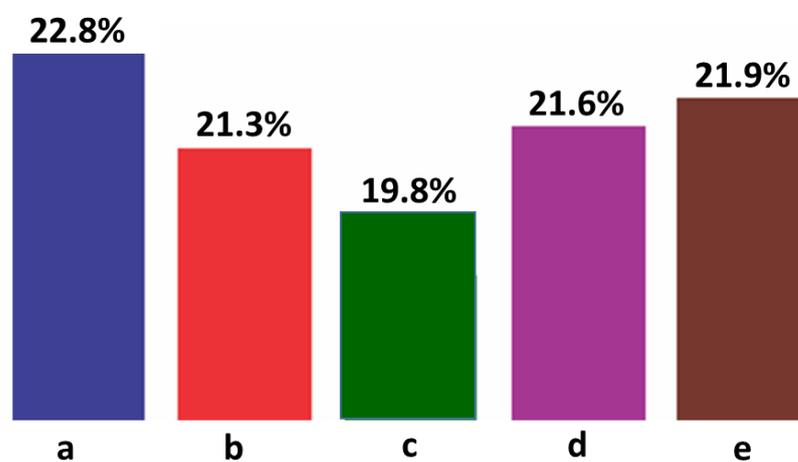


Figure 5 - Faculty of IT students' perspective on online teaching methods

Online Lecture Notes and Presentations (23%), Online Quizzes (22%), Online Assignment (22%), Video Recording of Lectures (21%) and Online Forums/Discussion/Debates with the lecturer/course coordinator/peers (20%) are the most interested to the least interested online teaching methods of the faculty of IT as indicated in the above figure 5.

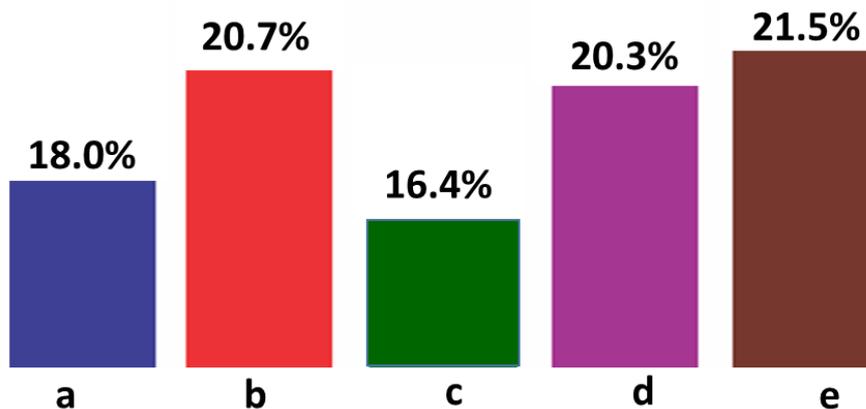


Figure 6 - Faculty of Management students' perspective on online teaching methods

a) Online Lecture Notes and Presentations	d) Online Assignment
b) Video Recording of Lectures	e) Online Quizzes
c) Online Forums/Discussion/Debates with the Lecturer/Course Coordinators/Peers	

As shown in the figure 6, Online Quizzes (22%), Video Recording of Lectures (21%), Online Assignment (20%), Online Lecture Notes and Presentations (18%) and Online Forums/Discussion/Debates with the lecturer/course coordinator/peers (16%) are the most interested to least interested online teaching methods in faculty of Management.

By evaluating the survey outcome of the faculty of IT, the average of 3.63 out of 5, students are interested in traditional classroom teaching methods while the average of 3.87 out of 5, students are interested in Online teaching methods.

According to the survey outcome of the faculty of Management, the average of 3.22 out of 5, students are interested in traditional classroom teaching methods whereas the average of 3.10 out of 5, students are interested in online teaching methods.

While using innovative and interactive methods in classroom and online teaching, through many other resources are also used to improve the learning quality such as Interactive Multimedia CD, Interactive TV, and Interactive White Boards.

### Reasons for selecting Classroom Teaching and Online Teaching Methods

Through the survey form, we further collected information of reasoning to select traditional classroom teaching methods or an online teaching methods in IT and Management disciplines. Following table indicates major reasons of selecting the above approach.

Table 1 – Reasons for selecting Classroom Teaching Methods and Online Teaching Methods

Discipline	Classroom Teaching Methods	Online Teaching Methods
<b>IT</b>	<ul style="list-style-type: none"> <li>• Lecturer's physical appearance is preferred</li> <li>• Lecturer's personal touch and attention are needed</li> <li>• Prompt reply or solution is received for a problem</li> </ul>	<ul style="list-style-type: none"> <li>• Saves time and convenient for learning</li> <li>• Can access at any time and from anywhere</li> <li>• Assignment can be uploaded in softcopy form</li> <li>• Even during absence, can refer to the lecture materials</li> <li>• Online version of reference books are available</li> <li>• Related videos are effective on topics</li> <li>• Immediate results or marks can be received through online quizzed</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Lecturer's physical appearance is preferred</li> <li>• Revisions sessions can be done</li> <li>• Lecturer's personal touch and attention are needed</li> <li>• Issues with the Internet connection will not be affected</li> <li>• Student-Teacher interaction is high</li> </ul>	<ul style="list-style-type: none"> <li>• More effective</li> </ul>

### Conclusion

Based on the critical evaluation of survey outcomes, it is evident that the preference for teaching approach and the methods of teaching are differ based on the subject discipline. Majority of students in the faculty of Management are interested in classroom teaching but the majority of students in the faculty of IT preferred online teaching practices.

A good reasons for the difference is that the students in the faculty of IT are used to the technology as they are in the discipline and other students in the management discipline are not that much conversant with the technology. Another reason is that most of the Lecturers in the faculty of IT use Learning Management System (LMS) effectively. As a policy, faculty of IT provides less number of handouts (hardcopy form) and therefore students are committed to use online materials and involved with activities through LMS to fulfill some requirements of their modules.

When we consider about classroom teaching practices, most of the students interested in Group discussions, Seminars and Workshops which have higher interaction among students and also with the Lecturer.

Most of the time Lecturers are concerned only about teaching and less priority for leaning factor. To become a good Lecturer, it is well known that the Lecturer should

pay more attention to learning factor. It is vital that the teacher should identify the type of the learner in each class irrespective of the discipline. By doing this the Lecturer can select the best teaching method/s either classroom or online. Also the learner type is very much important when preparing assessment.

Identifying learner types and use of appropriate innovative and interactive teaching methods, it is easy to improve the quality of learning and ultimately produce a good graduate.

### **Acknowledgement**

I would like to express my sincere thanks to Prof. Colin N. Peiris, Vice-Chancellor, the Acting Dean, Faculty of IT, and the Dean of the Faculty of Management to facilitate in conducting a survey among students and also students of faculties of IT and Management for giving their views during the survey.

### **References**

- Barker, J., & Gossman, P. (2013). The Learning Impact of a Virtual.
- Demian, P., & Morrice, J. (2012). The use of virtual learning environments and their impact on academic performance. *Higher Education Academy*.
- Horizon Campus Virtual Learning*. (n.d.). Retrieved from Horizon Campus: <http://lms.horizoncampus.edu.lk/report/outline/index.php?id=31>
- Peiris, C., Wickramasinghe, S., & Peiris, S. (n.d.). Assuring Standards and Quality of Higher Education: Teaching and Learning. *Asia Pacific Quality Network (APQN) Conference and AGM 2016*. Natadola, Fiji.
- Horizon Campus Virtual Learning*. (n.d.). Retrieved from Horizon Campus: <http://lms.horizoncampus.edu.lk/report/outline/index.php?id=31>

**Appendix - Survey on finding the best method for teaching**

1) Please mark the following classroom teaching methods based on your preference (1 – the least interesting and 5 the most interesting teaching method as indicated in below table)

<b>Classroom Teaching Methods</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
a) Lecture Method					
b) Group Discussion					
c) Individual Presentation					
d) Assignments					
e) Seminars					
f) Workshops					
g) Role Play					
h) Case Study					
i) Debate					

2) Please mark the following Online teaching methods based on your preference (1 – the least interesting and 5 the most interesting teaching method as indicated in below table)

<b>Online Teaching Methods</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
a) Online Lecture Notes and Presentations					
b) Video Recording of Lectures					
c) Online Forums/Discussion/Debates with the lecturer/course coordinator/peers					
d) Online Assignment					
e) Online Quizzes					