

Research Article

Lecture-Class Attendance Taking: Roll Number calling method versus Roll token collection method - A Comparative Study

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Abstract: Among the learning behaviors of students, one learning behavior that college students are often able to control is classroom attendance. Attendance is a partial index of student satisfaction. The proposal of study was to analyze the Roll number calling method including documentation of time required to take attendance and to compare Roll token collection method with this method. 96 lecture classes (54-for Roll number calling method, 42-for Roll token collection method) of class-size 102 and 96 were analyzed. In the innovative Roll token collection method readymade numbered plastic coins were used as Roll tokens. In Roll number calling method (n=54), average time required for calling roll numbers from first to last roll number was found 4min.20 sec. But Roll token collection method (n=42) did not use the lecture-time. Most of the disadvantages of Roll number calling method are the advantages of Roll token collection method. Even the infrequent in-class activities may make this innovative Roll token collection method, an effective way of taking attendance.

Keywords: Attendance, Learning behaviours, Lecture, Examination, Class-size, Faculty

INTRODUCTION

Lecture is the most economical means [1] and normally the only method employed in teaching large classes. Class attendance may be a major predictor of success but taking attendance in each lecture class can be extremely time consuming [2] specially in large class situation. In addition, there is also the very real practical difficulty of having a roll call of all students in a class during the lectures [3].

Among the learning behaviors of students, one learning behavior that college students are often able to control is classroom attendance [4]. Attendance is a partial index of student satisfaction [5]. Baum and Youngblood [6] examined attendance in a multi-section undergraduate accounting course and found when attendance was compulsory, daily attendance was 82%; when attendance was not compulsory, average daily attendance was reduced to 76%. Galichon and Friedman [7] examined correlates of class cutting at a metropolitan New York university and noticed, poor attendance was associated with preferences for socialization over study, the enjoyment of drinking alcoholic beverages and taking drugs, and the tendency to leave studying to the last minute. Students also indicated that the most important factors related to class cutting included finding the class boring, outside enjoyment, a dislike either the professor or the class, or the belief that class was unrelated to future careers [7]. Among the various ways of taking attendance, using Roll number calling method (calling roll number of students) for lecture-

class attendance is still very common. So proposal of study was to analyze the Roll number calling method including documentation of time required to take attendance and to compare Roll token collection method with this method.

MATERIALS AND METHODS

The present study was conducted in SVS Medical College, Mahabubnagar, Andhra Pradesh with due permission from Dean of the college between December 2011 to April 2012. We also took permission from Principal, SVS Institute of Dental Sciences, Mahabubnagar for its inclusion in this study.

A total of 96 lecture classes (54-for Roll number calling method, 42-for Roll token collection method) of class-size 102 and 96 were analyzed. The present work focused on time spent for taking attendance by Roll number calling method (calling the roll number of students) in a lecture class and a comparison between this method and Roll token collection method as described below. For recording time 3rd, 4th year MBBS students of medical college and 4th year BDS students of SVS Institute of Dental Sciences, Mahabubnagar were involved as a volunteer with their due written consent for this work. Consented volunteers recorded time using stop watch of their cellphones. They started the stop watch as the faculty started calling the roll number of students and stopped it as soon as the faculty called the last roll. They also

noted the time lag between lecture topic and attendance taking.

In the Roll token collection method, readymade numbered plastic coins purchased from local market, were used as Roll tokens. These were displayed on a board outside the lecture hall. Students were explained about the method and its purpose and instructed to collect their Roll tokens and leave the tokens in a plastic basket kept near the door of lecture hall. After 5 min. of the start of class, left out Roll token were treated as absent roll numbers. This method was used for 42 lecture classes.

Small size classes and classes in which attendance taken by any other methods were not included in this study. All the collected data were arranged, analyzed and presented in tabular form.

RESULTS

In Roll number calling method ($n=54$), time required for calling roll numbers from first roll number to last roll number varied between 1min.30sec. to 5min.45 sec. In nearly half of the classes (48.15%) time required to call the rolls was found between 4-5 minutes. In only 1 out of 54 lecture classes (1.85%) time required was found 1min.30 sec. (Table 1) Average time required for this purpose was 4min.20 sec.

Time lag between actual lecture topic and calling rolls was found to be varied between 1-2 minutes with average of 1min.21sec. In two classes this time could not be recorded as the attendance was taken before the lecture. Thus time spent for taking attendance was sum total of time required for calling roll number of students and time lag between actual lecture topic and calling rolls. It had range of 2min.30sec. to 6min.45sec. with average of 5min.41sec.

It was also noticed that faculty had to give some extra time after attendance to clarify the confusion and queries regarding attendance specially when fast attendance was taken.

Roll token collection method ($n=42$) did not use the lecture-time as it was used outside the lecture hall.

Table-1 :Time required (in range) for taking attendance in Roll number calling method. ($n=54$)

S.No	Time required (in min.)	No. of class	Percentage of class
1	1-2	1	1.85%
2	2-3	6	11.11%
3	3-4	8	14.81%
4	4-5	26	48.15%
5	5-6	13	24.07%

DISCUSSION

Lecture-class attendance can be taken by various ways but each way has its own advantages and disadvantages. In-class attendance taking by Roll number calling method is a real one-to-one conversation between the student and the teacher especially in large class situations and increases the student-teacher interaction. This interaction is essential irrespective of class size as it is important in endeavoring to breakdown the feeling of insignificance and anonymity [3]. Roll number calling method is a more teacher-centered activity and time-consuming method depending on the size of class. In the present study time spent for taking attendance by Roll number calling method was recorded and found in a range of 2min.30sec. to 6min.45sec. with an average of 5min.41sec. It was noticed that when attendance was taken in less time some extra time after attendance was required to clarify the confusion and queries regarding attendance. So actual average time spent for taking attendance may be more than 5min.41sec. In a recently published work [8] on faculties' view regarding class attendance in a class size of 100 students 75% faculty told 5-15 minutes time is required which is a significant time for 1hour lecture class. One more previous study suggests time required for taking attendance ranges between 2-15 min. [9]. Based upon the observations of present study and the previous studies attendance taking can be categorized into 5 types as in table-2. In fast attendance taking time can be saved but there are more chances of proxy attendance and more post-attendance confusion & queries indicating the low accuracy of attendance. In slow attendance taking accuracy of attendance is more but there is more wastage of time.

The Roll token collection method as described in materials and methods is a low-tech non teacher dependant way of taking attendance for lecture classes. There are certain important advantages of it over Roll number calling methods employed for taking attendance but not devoid of disadvantage. A comparison has been made in table-3. This method can save the time required for taking attendance in Roll number calling method and the time saved can be utilized for giving some in-class activities like short exams including multiple choice questions, fill in the blanks, very short notes or quizzes that can be completed within that limited time. In this method also there is a chance of proxy attendance by picking up roll token for his/her absent friend. This can be checked by giving some in-class activity/exercise.

The in-class exercise can act as a "double edged sword". At one side it can be the basis of attendance and at other side it makes the class more alive by making the student active and attentive [8]. Even the infrequent in-class activities may reduce or prevent the proxy attendance and make this innovative Roll token collection method, an effective way of taking attendance without wastage of lecture time.

Table-2 :Type of attendance based on time spent for taking attendance for class size of 100 students.

S. No.	Type of attendance	Time spent for attendance
1	Very fast	< 3 minute
2	Fast	3-5 minute
3	Normal	5-7 minute
4	Slow	7-10 minute
5	Very slow	> 10 minute

Table-3 :Comparison between Roll number calling method and Roll token collection method.

Roll number calling method	Roll token collection method.
<ul style="list-style-type: none"> • More teacher centered activity in which usually teacher calls students' roll no. • Conventional way of taking attendance. <p>Advantages-</p> <ul style="list-style-type: none"> • One to-one conversation between student and teacher. • No use of any appliances. <p>Disadvantages-</p> <ul style="list-style-type: none"> • Kills lecture time. • Faculty feels additional strain of calling a long list of roll no. • Sometime teacher to avoid calling roll no. involves class representative or section leader. Sometime it may cause legal and/or administrators' problem. 	<ul style="list-style-type: none"> • Non teacher centered activity in which students pick up their own roll token. • Innovative way of taking attendance. <p>Advantages-</p> <ul style="list-style-type: none"> • Saves lecture time. • Faculty feels relaxed. • No involvement of class representative or section leader. So no legal and/or administrators' problem. <p>Disadvantages-</p> <ul style="list-style-type: none"> • No one to-one conversation between student and teacher. • Roll tokens are used.

There are some limitations of this study. The findings of the study are based on observations made by students of different discipline and involvement of two little different class size. Number of classes is also less. Involvement of more number of classes may strengthen the present finding and reveal other dimensions in this regards. So further study is required.

Time required for taking class attendance can be influenced by many factors like:

1. class size.
2. method employed for taking attendance,
3. attendance policy whether attendance is compulsory or optional,
4. faculty's attitude and awareness towards lecture and attendance,
5. students' attitude, awareness and way of response,
6. significance of attendance over lecture content,
7. accuracy of attendance etc.

CONCLUSION

Most of the disadvantages of Roll number calling method are the advantages of Roll token

collection method. An In-class activity along with asking relevant questions by faculty during a lecture make the students attentive and promotes them to attend more and more classes which may lead to better academic performance. Even the infrequent in-class activities may make this innovative Roll token collection method, an effective way of taking attendance.

ACKNOWLEDGEMENT:

We sincerely thank the Dean, SVS Medical College, Principal, SVS Institute of Dental Sciences, Mahabubnagar, Andhra Pradesh for granting permission to carry out this work. We also thank all 3rd & 4th year MBBS and 4th year BDS students who actively participated in this work. Authors also acknowledge the great help and suggestions received from the faculty members and PG students, Department of Pharmacology and SVS Medical College, Mahabubnagar.

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