

A STUDY TO EVALUATE AN INTERVENTION FOR THE BETTER PERFORMANCE OF I MBBS STUDENTS (2009-10) BATCH - A MODULAR STUDY

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ABSTRACT

This report of improvement in the performance of I MBBS students (2009-2010) in Maharajah's institute of Medical sciences is due to an experimental intervention of periodic pre informed short syllabus part completion examination, apart from the regular internal assessment examinations and continuous interaction with and counseling the students in the presence of the parents as and when necessary.

A total of 100 students were subjected to this experimental intervention, calculations were made excluding the absentees. Data collected were subjected to mean, standard deviation and chi-square test evaluation. Findings showed that students found the subject more interesting (hence better performance) if the teaching faculty continuously involve and interact with them even though didactic lectures are not palatable. This intervention helped in uplifting some of the below baseline students in their performance. Few specific cases have been discussed during the process of counseling.

Keywords: *Experimental Intervention, Periodic Pre Informed Short Syllabus, chi-Square Test and Didactic.*

INTRODUCTION

Education is a process of acquiring knowledge (cognitive), skills (psychomotor) and attitudes (Affective) of any taxonomically defined branch of study; balanced on the tripod base of defined educational objectives, teaching /learning activities and evaluation with planning at the helm. The primary objective of Medical education is to cater the health needs of the society and also to advance in science to mitigate the new challenges.

When he set out, he did not know where he was going;

When he got there, he did not know where he was;

When he returned, he did not know where he had been

These words of Christopher Columbus (1995) represent the status of the contemporary medical student and Medical education. First year of MBBS is a transition to professional education from basic education during which if a student misses the track of pursuance it is mere abyss of Anatomy, Physiology and Biochemistry loads to learn, understand, retain to recall and perform well during evaluation.

It was observed over the years that the performance of the first year MBBS students of MIMS Nellimarla is deteriorating with negative outcome during evaluation. Only 4% students of 2009-10 batch crossed 50% mark during first internal evaluation in spite of being given a betterment chance. The scenario was discussed with the Head of the Department Anatomy and an intervention was designed. The need of the hour is to develop relevant strategy not only to impart knowledge as per schedule but also to analyze the reasons for the inadequate performance address them positively, motivate and build a positive intent towards the subject.

Aim of the study: To evaluate efficacy of the intervention of (PCAT, notify results and counseling) in the performance of the first year MBBS students.

1. To include regular evaluation of the students at end of a part of Syllabus (pre-informed) in a standard uniform format of questionnaire.
2. To notify the outcome, to the parents at regular intervals.
3. To counsel the student in the presence of the parents, understand their problem and address.

Research Question: Is there a significant improvement in the performance of the I MBBS (2009-10) with reference to the performance of (2008-2009) which is considered to be the control batch due to the implementation of the intervention?

Research Hypothesis

Null Hypothesis:

There is no statistically significant difference in the mean achievement scores of students due to the experimental intervention.

Alternative Hypothesis:

There is statistically significant improvement in the mean achievement scores of students due to the experimental intervention when compared to the control batch.

MATERIALS AND METHODS

Design and Methodology

The Student sample, instrument, procedures and statistical analysis that were used in the study are as follows

Research Sample

A sample of 100 first year MBBS (2009-2010) batch students of Maharajah's Institute Of Medical Sciences, Nellimarla, Dr. N.T.R. University of Health Sciences, Vijayawada.

Control group of students was not allocated from the same batch as this might bring retrograde performance affecting the student's career and future prospects but the performance of the I MBBS(2008-2009) is considered as control group.

Instrumentation

The instrument used for this study was Part completion assessment test (PCAT) which was developed by Head of The Department. The PCAT was serially held with an interval of 1 week.

Procedure for Administration of PCAT

Questionnaire was prepared by the Head of the Department of Anatomy adhering to the uniform format designed; materials and instructions were organised by the faculty member Concerned. The scripts were evaluated by senior faculty members following unbiased protocol then they were marked and subjected to statistical analysis.

Data Analysis

To compare student performance in post interventional data collected in the 12 adjusted PCAT, 3 internals and final university examination were subjected to mean, standard deviation and variance statistics.

The raw data so obtained is tabulated into five grades representing increasing continuous data with equal class intervals of 15 % E grade corresponding to the lowest percentage of marks ranging from (0-15%) followed by D (16-30%), C (31-45%), B(46-60%) and A (60>) respectively followed by two more columns, one denoting the number of absentees and the last column representing the arithmetic mean of grade percentage.

RESULTS AND DISCUSSION

The data was subjected to statistical analysis comparing the performance of I, II and III Internal assessment grades of experimental group of students (2009-2010) with that of respective Internal assessment grades of control group students of (2008-2009). The improvement in the performance of the students is not merely due to chance as within a confidence interval of 95 % and p value of 5%, the calculated chi-square test yielded a value of 3.26 for 20 degrees of freedom while the table chi-square test value at 5 % level of significance is 31.41. The mean performance declined during V, VI and X part completion assessment test to 25, 21.2 and 13 respectively as the students were tested for concept in neuroanatomy and embryology, the students were rectified with the right approach for future positive outcome.

Inference: The calculated chi-square test value (3.26) is less than the table chi-square test value (31.410). Therefore the Alternative hypothesis is accepted at 5% level of significance as the positive effect of the intervention on the performance holds good.

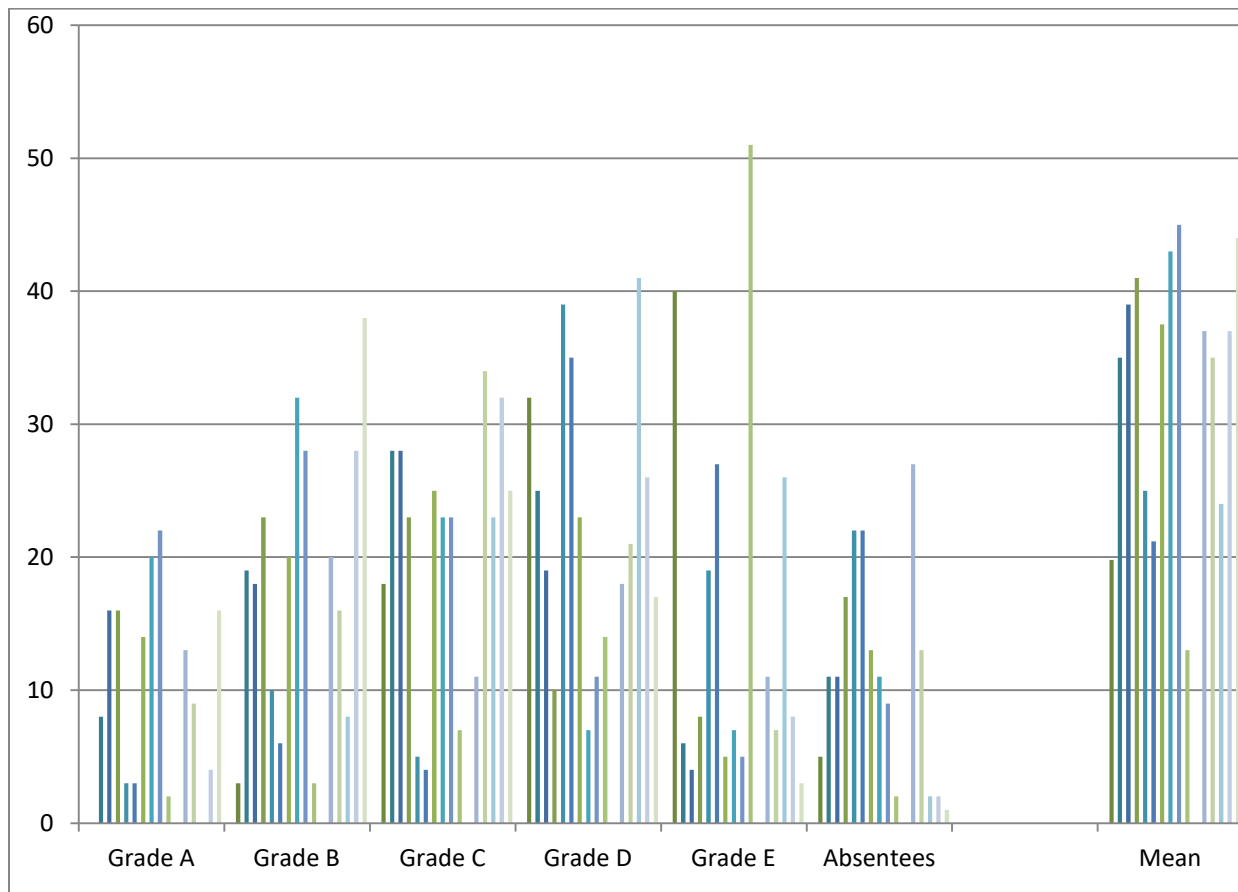


Chart 1: Depicting the Column Chart With frequency of Performance Grade on Y – Axis and the Grades On the X-Axis.

Table 1: Depicts the grades obtained by the MBBS students in their part completion and internal assessment.

	<u>Grade A</u>	<u>Grade B</u>	<u>Grade C</u>	<u>Grade D</u>	<u>Grade E</u>	<u>Absentees</u>	<u>Mean</u>
	<u>60%></u>	<u>46-60%</u>	<u>31-45%</u>	<u>16-30%</u>	<u>0-15%</u>		
I Part completion Exam	0	3	18	32	40	5	19.8
II Part completion Exam	8	19	28	25	6	11	35
III Part Completion Exam	16	18	28	19	4	11	39
IV Part Completion Exam	16	23	23	10	8	17	41
V Part Completion Exam	3	10	5	39	19	22	25
VI Part Completion Exam	3	6	4	35	27	22	21.2
VII Part Completion Exam	14	20	25	23	5	13	37.5
VIII Part Completion Exam	20	32	23	7	7	11	43
IX Part Completion Exam	22	28	23	11	5	9	45
X Part Completion Exam	2	3	7	14	51	2	13
XI Part Completion Exam	13	20	11	18	11	27	37
XII Part Completion Exam	9	16	34	21	7	13	35
I Internal grades (2009-10)	4	12	34	28	20	2	20.2
Control(2 008-09) Batch	2	8	23	41	26	--	26.14
II Internal Grades (2009-10)	4	28	32	26	8	2	37
Control(2 008-09) Batch	6	32	30	20	11	1	40.2
III Internal Grades (2009-10)	15	36	29	18	2	--	46.4
Control(2 008-09) Batch	16	38	25	17	3	1	44

Discussion

Linda A. Meyer 1983 in his work proved the positive Influence of changed strategy at district level which Increased Student achievement in Reading statistically significant due sample size he used Z- test to establish the significance .Communication, Learning facilities and proper guidance and family stress were considered as the factors influencing the student performance (Irfan, 2006). Factors influencing the performance of students of private colleges in Bangladesh were well documented (Hizazi, 2006).

Scocio economic status of the parents were found to be influencing the psychological stability of MBBS students (Chitra cheterjee, 2012) and performance of the students. Studies also observed that motivation of the students resulted in better performance along with other factors (Qishan Chen, 2018).

(Jimoh 2007) compared the achievements of the students pertaining to four different categories of chemistry and evaluated the significance of intent of the student in their achievement in a particular category. The author used f-cal, F-tab for the estimation of p value.

Very recently (Dima Hijazi, 2011) found circulating instructions Using cell phone SMS (short message service) rather than using paper, or computer format, to be significantly beneficial to the students .In the present long term experimental intervention study discretion has not been made in gender variables as the work by (Jimoh, 2007) clearly indicated that there is no influence on the achievements; in an interventional approach, the variance of achievement amongst the three categories of modes of admission also have not been considered, as earlier work showed this interventional approach does not yield to the ethnic or economic variations .Unlike the study of (Cohen Gl, 2006) which stated that the gap which existed amongst the performances of various races, had significantly improved due to the intervention of brief in-class writing assignments by 40% reduction in the gap of performance grades.

Gerardo (2011) opined that performance in pressure filled exams significantly improved, by a brief expressive writing assignment that occurred immediately before taking the test, in the present study repeated examinations in the similar format of the final university exam showed positive effect by reducing the examination fear.

In the present work there has been retrograde performance noted during 5th 6th and 10th part completion assessment exam, in rest of all the exams there has been a continuous improvement. During the process of the study it was noticed that this personal human touch of the faculty influenced a very positive change of attitude in few students who were considered failed, got through the University exam. Another incidental finding was the students had relatively less psychological break downs than earlier. Those who were regular absentees were amongst majority twenty two referred of this batch. Amongst ninety nine students appeared for University Exam five distinctions, thirty one first classes, and forty one second classes.

CONCLUSION

Teaching is not simply limited to didactic lectures; the message of the teacher has to be received by the student who might have had number of hurdles in the process. Counselling and a close interaction with regard to their problems of what so ever; a serene atmosphere of good rapport between student and the teacher is very much essential for better output and understanding by the student, Which may require an interdisciplinary interaction with the student for the benefit of below baseline student as the ultimate aim of the teacher will be to up lift the below baseline student group. A customised approach to tailor the needs by contemplation would be effective.

Limitations: Smaller sample size in the present study cannot prompt any generalization of observations .

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