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CORRELATION OF ACADEMIC PERFORMANCE WITH ENTRANCE EXAM OF MBA STUDENTS

Abhijeet Birari[1] & Rajinder Singh Randhawa[2]

[1]*Assistant Professor, Ph.D Research Scholar, MGM Institute of Management, Aurangabad, Maharashtra, India*

[2]*Assistant Professor, MGM Institute of Management, Aurangabad, Maharashtra, India.*

ABSTRACT

Academic achievements and intelligence have strong relationship which has been widely studied and accepted. Is there a correlation between performance in graduation marks, entrance exam marks and post-graduation marks? Studies have been carried out to investigate this relationship worldwide and the results have stated that the intelligence correlates positively with academic performance. There have been very few such studies carried out in Maharashtra state and especially for MBA students. This study attempts to find answers of these questions. 112 Students of a batch of an MBA institute in Aurangabad city were considered for the analysis. Karl Pearson's Coefficient of Correlation was used to find out the correlation. Independent samples T Test was used to know whether significant difference exists in performance of male & female and reserved & unreserved students. IBM SPSS Version 20 was used to carry out all the tests. Findings of the study showed that the performance of students in MBA entrance exam has very weak correlation with graduation and post-graduation marks. Males and females differ significantly in academic performance at graduation, post graduation and entrance exam levels. Unreserved category candidates scored better overall and were found to have significant difference in performance in entrance exam. The findings of the study don't resemble with the historical studies so there is a need to dig into the reasons and obtain the solutions of this problem.

KEYWORDS: Academic Performance, Correlation, Entrance Exam, Graduation, Post-graduation

INTRODUCTION

Now-a-days, it is frequently observed that students sign up for higher studies with less interest or take is casually. Moreover, there are very few institutions in India who are giving quality inputs so as to inculcate the learning skills amongst students. Higher Education System in India compare to developing/developed countries needs substantial improvement. The percentage of students taking higher education is hardly about 13 % whereas the same is varying between 28 to 90 %, across the world. The lowest % being 28 % and the same is as high as 90 % in developed countries. At one end we claim that India would rank 3rd among all countries by 2020 in education. If we observe overall ranking of relevant institutions, it's seen that in the year 2000, out of 500 there were 2 Indian Universities / Institutes were featured in the list, and 1 institution from China. Now almost after a decade in 2010 the tables have changed with only 1 institution from India being featured and 32 institutions are featured from China! (Sanjay Chordiya, 2013). Wheebox conducts employability skill test which assesses skills in English Language, Aptitude and Domain knowledge for students of B.E, B.Tech, MBA and MCA. According to a study conducted by Wheebox, People's Strong in collaboration with Confederation of Indian Industry, it was revealed that only 34% of the graduates are employable. (Wheebox, 2013)

RESEARCH OBJECTIVES

- ★ To find out correlation of performance between graduation, entrance exam and post-graduate performance.
- ★ To analyze gender wise performance of students.
- ★ To study whether significant difference exists in performance of reserved and unreserved students.

RESEARCH METHODOLOGY

Analytical study was made to obtain objectives of study based on secondary data. MBA students of one batch of an institute in Aurangabad city, Maharashtra were considered for the study. Total students considered were 112 (58 males and 54 females, 42 reserved and 70 unreserved). Data related to graduation marks and MBA entrance exam marks was obtained from Directorate of Technical Education website. Post-graduation marks' data was obtained from website of. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Some data was also obtained from students' marks details provided by exam department of Dr. BAMU. Four hypotheses were made in this study and hypothesis testing was done using Karl Pearson's Coefficient of Correlation and Independent Samples T Test using IBM SPSS Version 20. Hypotheses were tested with 95% confidence level i.e. at 5% significant level.

HYPOTHESES

H_{01} =There is no strong significant positive correlation ($r > 0.7$) in graduation & entrance exam marks.

H_{02} =There is no strong significant positive correlation ($r > 0.7$) in entrance exam marks & post-graduation marks.

H_{03} =Males and females don't differ significantly in performance.

H_{04} =There is no significant difference in performance of reserved and unreserved students

LITERATURE REVIEW

Under a study to find out the relationship of entrance test scores with the trainees' academic achievement and their attitude towards teaching on a sample of 200 B.Ed. students, author found significantly positive relationship between scores in the entrance test and B.A./B.Sc. examination and also a significant positive correlation between the entrance test scores and

teaching attitude of the candidates. Author also found that the reserve categories candidates' performance was lower as compared to the general category candidates with regard to entrance test and B.A. / B.Sc. examinations and their teaching attitude was also lower. (Kaur, 2002)

Does education at all levels cause growth? India, a case study, seeks to examine the impact of education on income growth in India for the time period 1966–1996. Time series techniques were used to determine whether education, for each category, had a causal impact on growth. Furthermore, the education variables were also broken down by gender and analysis was carried out to determine whether the causal results varyby gender. The results indicated that primary education had a strong causal impact on growth, with more limited evidence of such an impact for secondary education. Finally, the evidence was quite compelling that it is female education at all levels, that had potential for generating economic growth. (Sharmistha Self & Richard Grabowski, 2003).

DATA ANALYSIS AND INTERPRETATION

Table 1 shows the details of marks of graduation and MBA entrance exam. Gender wise and category wise bifurcation is made in the table. It is clear that females have performed better than boys in all three years and in both types of exams. As far as reservation is concerned, reserved candidates have scored lower than underserved category which is seen for all the three years and in all types of exams.

Table1: Academic Details of Students

Average Score						
	Graduation			Entrance Exam		
	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14*
Male	58.83%	63%	64%	69	65	71
Female	65%	68%	67%	74	70	69
Reserved	59%	64%	63%	66	66	56
Unreserved	63%	66%	65%	75	68	69

**Entrance exam scores for 2013-14 batch were of CMAT which was newly introduced, MH-CET was conducted for rest of the years.*

HYPOTHESES TESTING

For hypotheses testing, data of students of 2012-14 batch was considered. Following four hypotheses were tested for students of 2012-14 batch.

Hypothesis 1:-

Table 2 shows the correlation of academic performance of students since graduation. It is generally expected that a student performing well in graduation should perform well in the future examinations as well. Null hypothesis 1 states that there is no strong significant positive correlation between graduation marks & CET.

A Pearson product-moment correlation was run to determine the relationship between graduation marks and MBA CET marks. The data showed no violation of normality, linearity or homoscedasticity. There was a very weak positive correlation between graduation marks and MBA CET marks, which was statistically insignificant (r = .101 n = 112, p = .287). Despite of weak relation with graduation marks, it is statistically insignificant (p=0.287) so we accept the null hypothesis 1. It can be interpreted that even if a student scores good marks in graduation, he need not necessarily score well in CET. It is important to mention here that CET exam is objective in nature and it assesses skills in areas of English, logic, mathematics, data interpretation, reasoning, general knowledge etc. A student has to perform well in order to score good marks in this exam. It is difficult to manipulate the results

of this exam as it is objective in nature and therefore the scores obtained in this test show true and fair performance of the candidates.

Hypothesis 2:-

For correlation between CET marks and post graduation marks, the hypothesis states that there is no strong significant positive correlation (r > 0.7) in entrance exam marks & post-graduation marks. A Pearson product-moment correlation was run to determine the relationship between post graduation marks and MBA CET marks. The data showed no violation of normality, linearity or homoscedasticity. There was a very weak positive correlation between post graduation marks of Semester I and MBA CET marks, which was statistically significant (r = .316 n = 112, p = .001). For Semester II, it was (r = .173 n = 112, p = .069) and for Semester III, it was (r = .186 n = 112, p = .049). Weak positive relationship is observed in all the levels which was significant so we reject the null hypothesis. If we analyze this correlation, it can be found that there is no strong correlation between CET marks and Semester marks across the MBA. It means that CET marks have no relevance when it comes to performance in MBA is concerned i.e. a student scoring low in CET may score well inMBA result.The summary is provided in Table3.

Table2: Correlation of Academic Performance of Students

		Graduation Marks	MH-CET Marks	MBA I Sem Marks	MBA II Sem Marks	MBA III Sem Marks
Graduation Marks	Pearson Correlation	1	.101	.527**	.446**	.242*
	Sig. (2-tailed)		.287	.000	.000	.010
	N	112	112	112	112	112
MH-CET Marks	Pearson Correlation	.101	1	.316**	.173	.186*
	Sig. (2-tailed)	.287		.001	.069	.049
	N	112	112	112	112	112
MBA I Sem Marks	Pearson Correlation	.527**	.316**	1	.715**	.634**
	Sig. (2-tailed)	.000	.001		.000	.000
	N	112	112	112	112	112
MBA II Sem Marks	Pearson Correlation	.446**	.173	.715**	1	.590**
	Sig. (2-tailed)	.000	.069	.000		.000
	N	112	112	112	112	112
MBA III Sem Marks	Pearson Correlation	.242*	.186*	.634**	.590**	1
	Sig. (2-tailed)	.010	.049	.000	.000	
	N	112	112	112	112	112

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: Summary of Null Hypothesis 1 & 2

(Correlation and Significance Level with CET Marks)

Academic Level	Coefficient of Correlation (r)	Significance Level	Result	H01 & H02
Graduation Marks	0.101	0.287	Weak, Insignificant Correlation	Accepted
MBA I Sem Marks	0.316	0.001	Weak, Significant Correlation	Rejected
MBA II Sem Marks	0.173	0.069	Weak, Significant Correlation	Rejected
MBA III Sem Marks	0.186	0.049	Weak, Significant Correlation	Rejected
			Alpha level=0.05	

Hypothesis 3:-

Independent Samples T Test was carried out to find out whether there is a significant difference in academic performance of males and females. It is clear from Table 4 that there is a significant difference in academic performance of males and females as the value of two tailed significance is below 0.05 for all levels of education hence we reject null hypothesis 3.

Table 4: Gender wise level of significance -Independent Samples T Test

Academic Level	Significance Level	H03
Graduation Marks	.000	Rejected
MH-CET Marks	.007	Rejected
MBA I Sem Marks	.000	Rejected
MBA II Sem Marks	.000	Rejected
MBA III Sem Marks	.001	Rejected
Alpha level=0.05		

Hypothesis 4:-

Independent Samples T Test was carried out to find out whether there is a significant difference in academic performance of reserved and unreserved students. The test gave some interesting results. As shown in Table 5, there is no significant difference in academic performance of reserved and unreserved students in graduation and in semester II & III as significance value is above 0.05 for these levels of academics. So we accept the null hypothesis. It is observed that value of significance is less than 0.05 for CET marks and semester I marks so we reject the null hypothesis and accept alternate hypothesis that there is a significant different in their marks when it comes to CET and semester I.

Table 5: Category wise level of significance- Independent Samples T Test

Academic Level	Significance Level	H04
Graduation Marks	.129	Accepted
MH-CET Marks	.021	Rejected
MBA I Sem Marks	.025	Rejected
MBA II Sem Marks	.267	Accepted
MBA III Sem Marks	.387	Accepted
Alpha level=0.05		

CONCLUSION

Clearly, the entrance exam marks of MBA have very weak correlation with graduation marks as well as post graduation marks. The study has statistical limitations and reasons behind these weak correlations couldn't be found but somewhere the academic performance measurement system at graduate as well as post graduate level needs to be studied. A student scoring low in entrance exam should score low in post-graduation too. This can be another topic for the research. There was statistically significant difference in performance of males and females; females scored better than males at all levels of academics. Reserved candidates score better than unreserved candidates at all levels of education under the study. However, there were significant differences only in case of CET marks and semester I marks; for rest of the levels, there was no significant difference. It was also observed that performance at post graduate level tends to remain constant.

SCOPE FOR FURTHER RESEARCH

The limitations of the study can create scope for further research. First, in terms of sample size and second in terms of level of students i.e. most of the students in this study were from Marathi medium, studied at state

board level so students at CBSE or ICSE level may be studied. A study can be carried out to find out the reasons behind the weak correlation or reason behind not scoring well in entrance exam. The modus operandi of examination at graduate and post graduate level is also an area which can be studied.

SUGGESTIONS OF THE STUDY

It is a matter of concern that the aptitude test (entrance exam) marks have very weak correlation with academic performance. There is no point in having entrance exam if it can not result into same level of academic performance. So there is a need to rethink on academic performance measurement system; the performance criteria should clearly assess true and genuine aptitude of the candidate in respective areas. Examinations should include combination of subjective and objective type questions which should reflect true and fair performance. There is also need to revise curriculum in view of global aspect of businesses and economics, dynamism in industry practices, evolution in technology. Transparency, objectivity and quality are the key factors that will help achieve required skills and result into employability.

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APPENDICES

Annexure I

Gender wise Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Graduation Marks	**Male**	58	63.3344	6.56334	.86181
	Female	54	70.5416	6.14368	.83605
MH-CET Marks	**Male**	58	65.7586	9.52432	1.25060
	Female	54	71.5556	12.71259	1.72997
MBA I Sem Marks	**Male**	58	458.4483	32.98281	4.33086
	Female	54	505.1481	43.32737	5.89611
MBA II Sem Marks	**Male**	58	461.6552	44.88486	5.89367
	Female	54	501.6111	45.66383	6.21406
MBA III Sem Marks	**Male**	58	465.9138	38.84485	5.10058
	Female	54	494.5185	48.60730	6.61462

Annexure II

Category wise Group Statistics					
	Category	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Graduation Marks	**Reserved**	42	65.4557	8.33097	1.28550
	Unreserved	70	67.6215	6.52719	.78015
MH-CET Marks	**Reserved**	42	65.3333	11.02252	1.70081
	Unreserved	70	70.4857	11.41921	1.36486
MBA I Sem Marks	**Reserved**	42	468.7857	46.06228	7.10756
	Unreserved	70	488.2714	42.65328	5.09804
MBA II Sem Marks	**Reserved**	42	474.2143	40.27984	6.21531
	Unreserved	70	484.9429	53.89896	6.44216
MBA III Sem Marks	**Reserved**	42	474.8333	38.16838	5.88951
	Unreserved	70	482.6286	50.04148	5.98110