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Comparative study of performance of constituent and affiliated agricultural colleges in Maharashtra

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Abstract

In Maharashtra at present having 156 affiliated agriculture and allied colleges which are highest number of agricultural colleges in the country, in which 11990 students admitted in affiliated colleges and 2717 students admitted in constituent colleges.

Due to affiliated agricultural colleges, more number of students admitted for under graduate courses in agriculture and allied branches. As advent of these affiliated colleges, many issues are raised regarding quality of education maintained by these colleges. Therefore it has been planned to study the performance of affiliated agricultural colleges in comparison with constituent agricultural colleges. In all 40 agricultural colleges (13 constituent agricultural colleges and 27 affiliated agricultural colleges) were purposively selected from all State Agricultural Universities in Maharashtra.

The study revealed that, majority of the affiliated agricultural colleges i.e. 62.97 per cent were found in 'C' grade followed by 22.22 per cent in 'D' grade, 11.11 per cent colleges had got 'B' grade. While only 3.70 per cent colleges were found in 'A' grade. Regarding constituent agricultural colleges, it was observed that, more than half of the colleges i.e. 53.85 per cent were having 'A' grade followed by 30.77 per cent colleges got 'B' grade and 15.38 per cent colleges were having 'C' grade. There was not a single college found in 'D' grade.

Keywords: Performance, agricultural colleges, Maharashtra

Introduction

In Maharashtra, before privatization of agricultural education, only 2717 students could get admissions for under graduate courses in 33 constituent colleges. Considering the huge number of applications for admissions to agriculture and allied courses, need for privatization was felt by the policy makers as there are limitations of resources to increase the number of constituent colleges. Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli has taken initiative in privatization of agricultural education in Maharashtra by starting three affiliated agricultural colleges in the year 2001 viz. College of Agriculture, Saralgaon, Dist. Thane, College of Agriculture, Mandki and College of Horticulture, Kharwate, Dist. Ratnagiri and afterwards affiliated colleges were also established by other agricultural universities of Maharashtra state. In Maharashtra at present having 156 affiliated agriculture and allied colleges which are highest number of agricultural colleges in the country, in which 11990 students admitted in affiliated colleges and 2717 students admitted in constituent colleges.

Due to affiliated agricultural colleges, more number of students admitted for under graduate courses in agriculture and allied branches. As advent of these affiliated colleges, many issues are raised regarding quality of education maintained by these colleges. It was observed that many affiliated agricultural colleges have poor infrastructural facilities, lack of qualified teachers. Salary given to the teachers is not as per the UGC norms, that's why teachers with requisite qualification didn't join affiliated agricultural colleges or there is tendency of changing job frequently. These factors are responsible for academic performance of the colleges. Therefore it has been planned to study the performance of affiliated agricultural colleges in comparison with constituent agricultural colleges and also to identify various factors associated with the performance of these colleges.

Methodology

The study was undertaken in the state of Maharashtra selecting agricultural colleges from all State Agricultural Universities.

Research Design: Ex-post facto research design was used for conducting this investigation.

Sample size and its distribution

Agricultural education consists of several branches such as Horticulture, Forestry, Fishery, Agricultural Bio Technology, Food Technology, Agricultural Engineering, Community Science and Agricultural Business Management in addition to Agriculture. Among the 156 affiliated colleges in Maharashtra state, more than fifty per cent i.e. 75 colleges are agricultural colleges, hence only agricultural colleges were selected for the present study and colleges of allied branches are excluded from the present study.

Keeping in view, the objectives and hypotheses of the research, constituent and affiliated colleges in the jurisdiction of all four agricultural universities were selected purposively which have completed eight years so that the overall performance of the affiliated as well as constituent colleges can be compared effectively. On the basis of this criteria, 40 agricultural colleges in which 13 constituent agricultural colleges and 27 affiliated agricultural colleges were selected. The minimum requirements for starting agricultural colleges are already put forth by Indian Council of Agricultural Research, New Delhi which are followed by Maharashtra Council of Agricultural Education and Research, Pune as well as State Agricultural Universities. Considering these norms and the scale developed by Tarde (2002)^[4] and Thoke (2011)^[5] the schedule was developed by the researcher with some modifications.

Scoring of quantitative items

| Sr. No. | Availability | Score |
|---------|-----------------------|-------|
| 01. | Up to 20 per cent | 1 |
| 02. | 21 to 40.00 per cent | 2 |
| 03. | 41 to 60.00 per cent | 3 |
| 04. | 61 to 80.00 per cent | 4 |
| 05. | 81 per cent and above | 5 |

Scoring of qualitative items

| Sr. No. | Extent of achievement of purpose | Response Code | Score |
|---------|----------------------------------|---------------|-------|
| 01. | Purpose not served | E | 1 |
| 02. | Purpose served poorly | D | 2 |
| 03. | Purpose served adequately | C | 3 |
| 04. | Purpose served to a large extent | B | 4 |
| 05. | Purpose fully served | A | 5 |

The Overall performance of Agricultural Colleges was decided by using the following formula given by Tarde (2002)^[4]

$$P_i = \frac{S_i + S_r}{S_o} \times 100$$

Where,

P_i = Performance index

S_i = Obtained score of items

S_r = Obtained score of academic performance

S_o = Obtainable score of items

Thus, the performance index of all agricultural colleges was worked out and they were grouped into four grades, on the basis of range between maximum and minimum performance index of these colleges.

Results and discussion

Table No. 1 depicts that, majority of the affiliated agricultural colleges i.e. 62.97 per cent were found in 'C' grade followed by 22.22 per cent in 'D' grade, 11.11 per cent colleges had got 'B' grade. While only 3.70 per cent colleges were found in 'A' grade. Regarding constituent agricultural colleges, it was observed that, more than half of the colleges i.e. 53.85 per cent were having 'A' grade followed by 30.77 per cent Colleges got 'B' grade and 15.38 per cent colleges were having 'C' grade. There was not a single college found in 'D' grade.

These results clearly indicated that constituent agricultural colleges were having better performance in comparison with affiliated agricultural colleges. This might be due to the fact that constituent agricultural colleges were older, well established with good infrastructural facilities, well established laboratories, library, farm, livestock, hostels and experienced faculties having high credentials. On the contrary, affiliated agricultural colleges were weak in many aspects like poor infrastructural facilities, unqualified and unexperienced faculties, inadequate laboratories, library, farm, livestock, hostels, etc. As these colleges' runs by private institutes, these colleges did not received grants from government and in operation on their own funds that's why they are facing many difficulties. At overall level, most of the agricultural colleges (47.50%) had got 'C' grade with performance index '45.24 to 56.41'. One-fifth of the agricultural colleges under study had 'A' grade with performance index '67.62 and above', while 17.50 per cent of the agricultural colleges were found under 'B' grade with performance index '56.42 to 67.61' and Only 15.00 per cent agricultural colleges were having 'D' grade with performance index 'Up to 45.23'. These findings are similar with the results of Tarde (2002)^[4]. The average performance index of the agricultural colleges under study was 56.42 which indicated that most of the agricultural colleges fell in C grade. The maximum and minimum performance index of the agricultural colleges was 67.62 and 45.23 respectively, indicating range of 22.39 per cent between the top ranking and lowest ranking Agricultural Colleges.

It can be concluded that there is much difference in the performance of constituent and affiliated agricultural colleges which indicates the urgent need of improvements especially for affiliated agricultural colleges. Hardly 4 affiliated agricultural colleges were in top ranking grades i.e. A and B which indicates poor quality of educational standards.

Comparison between the performance standard of the affiliated and constituent agricultural colleges

On the basis of this finding given in Table No.2, regards to comparison between constituent and affiliated agricultural colleges in terms of independent variables, it was inferred that there is significant difference between affiliated and constituent agricultural colleges with respect to all the independent variables, namely physical infrastructure on college campus, academic and administrative staff and their effectiveness in management, salary and increments of teachers, stability and job satisfaction of teachers, availability of teaching learning facilities and aids, practical training through farm and laboratories, exposure through field visits and study tours, organization of co-curricular activities, academic performance of the students and performance of graduated students. It was found that constituent agricultural colleges were having better facilities and performance than affiliated agricultural colleges on the basis of all these

parameters. It means that the hypothesis stating 'Overall performance of the Affiliated Agricultural Colleges is not at par with the constituent agricultural colleges' is accepted. This might be seen because constituent agricultural colleges having historical background, well trained human resources, fund provision from ICAR and state government,

implementing faculty development programme, organizing trainings for capacity building of the teachers. However, affiliated agricultural colleges did not have trained manpower, inadequate funds, did not have faculty development programme and as teachers are temporary, management did not want to spend money on capacity building of teachers.

Table 1: Grading of Agricultural Colleges based on performance index

| Sr. No. | Grade | Performance Index | Affiliated Agricultural Colleges (N=27) | | Constituent Agricultural Colleges (N=13) | | Total (N=40) | |
|---------|-------|-------------------|---|------------|--|------------|--------------|------------|
| | | | Number | Percentage | Number | Percentage | Number | Percentage |
| 1. | A | 67.62 and above | 01 | 03.70 | 07 | 53.85 | 08 | 20.00 |
| 2. | B | 56.42 to 67.61 | 03 | 11.11 | 04 | 30.77 | 07 | 17.50 |
| 3. | C | 45.24 to 56.41 | 17 | 62.97 | 02 | 15.38 | 19 | 47.50 |
| 4. | D | Up to 45.23 | 06 | 22.22 | 00 | 00.00 | 06 | 15.00 |
| | | Total | 27 | 100 | 13 | 100 | 40 | 100 |

Table 2: Anova table showing 'F' value for comparison of performance of Constituent and Affiliated Agricultural Colleges

| Sr. No. | Independent variables | Mean squares | | F value |
|---------|---|----------------|--------------|-----------|
| | | Between groups | Within group | |
| 1 | Physical Infrastructure on college campus | 20104.957 | 1213.206 | 16.572** |
| 2 | Academic and administrative staff and their effectiveness in management | 1162.507 | 136.197 | 8.535** |
| 3 | Salary and increments of teachers | 3601.590 | 5.558 | 648.059** |
| 4 | Stability and job satisfaction of teachers | 431.026 | 16.552 | 26.041** |
| 5 | Availability of teaching learning facilities and aids | 877.5 | 58.316 | 15.047** |
| 6 | Practical training through farm and laboratories | 15878.544 | 732.874 | 21.666** |
| 7 | Exposure through field visits and study tours | 36.310 | 1.147 | 31.654** |
| 8 | Organization of co curricular activities | 15789.339 | 392.617 | 40.216** |
| 9 | Academic performance of the students | 32978.481 | 1395.298 | 23.635** |
| 10 | Performance of graduated students | 6802.815 | 264.320 | 25.737** |

** Significant at 0.01 level of probability

Conclusions

It was found the, majority of the Affiliated Agricultural Colleges i.e. 62.97 per cent were found in 'C' grade followed by 22.22 per cent in 'D' grade, 11.11 per cent Colleges had got 'B' grade. While only 3.70 per cent Colleges were found in 'A' grade. Regarding Constituent Agricultural Colleges, it was observed that, more than half of the Colleges i.e. 53.85 per cent were having 'A' grade followed by 30.77 per cent Colleges got 'B' grade and 15.38 per cent Colleges were having 'C' grade. There was not a single College found in 'D' grade.

The findings regards to grading of agricultural colleges based on performance index showed that, affiliated agricultural colleges were having poor performance as against constituent agricultural colleges. There was a single affiliated college in 'A' grade while there was not a single constituent agricultural college in 'D' grade. It shows the gap between these two types of colleges and signifies the need to improve overall performance of affiliated agricultural colleges.

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