

## Evaluation Study of B.Sc. (Agri.) and B.Sc. (Hort.) programme offered by School of Agricultural Sciences, YCMOU, Nashik

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**ABSTRACT:** The School of Agricultural Sciences has developed and implemented various certificate, diploma and degree level programmes in agriculture reaching out to almost 2,00,000 lakhs farmer learners till date. The unique feature of vertical mobility has abled the 10<sup>th</sup> fail farmer learner to reach upto the degree level.

In recent years, target group has shifted to young learners. Therefore, it becomes more important now to know whether the intended objectives and mandates are still relevant, whether the study material is still relevant, whether the study material needs change in its design and format, whether the implementation activities are consistent with objectives, whether the counselors need to be trained differently, whether the programme delivery needs through change, whether examination pattern is suitable, whether the preparation of degree project is necessary, whether the target learners are benefitted in terms of satisfaction and knowledge enrichment, whether the employability objective is fulfilled, etc. The present study proposes a systematic learner feedback to reveal the lacunas in present programme material and implementation process and programme consistency with changed target learner.

**Keywords :** Evaluation Study, Agricultural Education Programme, Open Education

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### INTRODUCTION

Yashwantrao Chavan Maharashtra Open University, Nashik is an university established by the Maharashtra Legislative assembly Act No. 20 of 1989 on July 1<sup>st</sup>, 1989. The university is recognised by UGC under section 12 B. The major objectives of the university are i) to make higher, vocational and technical education available to large sections of the population, ii) to give special attention to the needs of the disadvantaged groups, in particular and people in rural areas and women and iii) to provide an innovative, flexible and open system of education by using distance learning methodology and by applying modern communication technologies in education.

At present, YCMOU, Nashik is offering 200 programmes and every year, on an average, 150,000 new students are registered for the various programmes. The cumulative enrolment as it stands today, is in excess of 29,00,000 students. YCMOU is a pioneer in offering agricultural programmes through distance mode.

The School of Agricultural Sciences was established in 1989 with the objective to provide vocational and higher education and to promote open and distance education in agriculture. Since its establishment, the School of Agricultural Sciences has developed and implemented various certificate, diploma and degree level programmes in agriculture reaching out to almost 2,00,000 lakhs farmer learners till date. Initially, crop wise programmes covering only a single crop were started. With the opening enrolment of 81 students in the year 1990, these twelve crop wise programmes started gaining popularity. With this successful experience, School of Agriculture Sciences developed and implemented various diploma programmes viz. Diploma in Commercial Fruit Production, Diploma in Commercial Vegetable Production and Diploma in floriculture and landscape Gardening and Degree level programmes like B.Sc.(Agri.) and B.Sc.(Horti.). Students' overwhelming response to these programmes boosted up the total enrolment up to 5900 in year 2002.

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**Programme profile**

The unique feature of vertical mobility has abled the 10<sup>th</sup> fail farmer learner to reach upto the degree level.

A 10<sup>th</sup> fail farmer learner can enrol to a certificate programme i.e. Certificate in Gardening. After successful completion of this certificate programme, by taking the advantage of vertical mobility, the learner can enrol for the programme - Foundation in Agricultural Sciences. This programme is also considered as first year for various agricultural diploma programmes and degree programmes. After successfully completing the foundation programme, a learner can go to the next level i.e. Diploma in Horticulture or Diploma in Agri-business management or Diploma in Agro-journalism in a sequence or at random. This is the framework for B.Sc. (Agri.) programme.

For B. Sc. (Hort.) programme, a learner has to complete the foundation programme, and then another three diplomas i.e. Diploma in Fruit Production or Diploma in Vegetable Production or Diploma in Vegetable and Landscape Gardening in a sequence or at random.

After successful completion of Foundation programme as well as three diplomas, it is considered that the learner has completed initial four years of the degree programme. Then the learner is allowed to appear for the entrance examination for the last year of the degree programme. Once, the learner clears the entrance examination, the learner is allowed to enrol for the last year of the degree programme. This way, at the end of last year, learner is having three diplomas and one degree in hand.

The first batch of B. Sc. (Horticulture) programme passed out in 1997 and B.Sc. (Agriculture) programme in 2003.

**Table 1**  
**Year wise students B.Sc. (Agriculture) or B.Sc. (Horticulture) is as follows**

Year	B.Sc. (Agriculture)	B.Sc. (Horticulture)	Year	B.Sc. (Agriculture)	B.Sc. (Horticulture)
1997		*145	2006	250	150
1998		187	2007	250	200
1999		172	2008	339	146
2000		153	2009	659	226
2001		-	2010	291	173
2002		237	2011	765	691
2003	*126	127	2012	454	1351
2004	89	118	2013	563	216
2005	250	150	2014	668	281

\* Start of first batch

These two degree programme are being offered since 1997 and 2003 respectively and now it is need of the hour to learn the intended and unintended impact of these programmes. It is in general said that most of our learners are getting employed at various establishments all over Maharashtra state and even outside the state. These programmes were intended to increase the employability and farm incomes.

In recent years, target group has shifted to young learners. Therefore, it becomes more important now to know whether the intended objectives and mandates are still relevant, whether the study material is still relevant, whether the study material needs change in its design and format, whether the implementation activities are consistent with objectives, whether the counselors need to be trained differently, whether the programme delivery needs through change, whether examination pattern is suitable, whether the preparation of degree project is necessary, whether the target learners are benefitted

in terms of satisfaction and knowledge enrichment, whether the employability objective is fulfilled, etc.

The present study proposes a systematic learner feedback to reveal the lacunas in present programme material and implementation process and programme consistency with changed target learner.

**Objectives of Research**

The objectives of research are:

- i) To evaluate various student support services involved in B.Sc. (Agriculture) and B.Sc. (Horticulture) programmes
- ii) To assess the appropriateness of the study material and project report of B.Sc. (Agriculture) and B.Sc. (Horticulture) programmes
- iii) To measure the extent of employability of the pass out learners of B.Sc. (Agriculture) and B.Sc. (Horticulture) programmes.

## RESEARCH METHODOLOGY

The research was conducted by applying **Post-programme only With Retrospective Pre-programme Measure Design** in case of pass out learners wherein pre-programme measures were obtained but after exposure to the programme. The learners were asked for pre-programme and post-programme information but only after completion of the programme.

The total number of pass out students of both the degree programmes in the year 2014 (668+281 = 949) from all over Maharashtra state were considered for the study. From this sample size 10 students were randomly selected from each study centre. Accordingly, 57 centres x 10 = 570 students who have completed degree programme were selected randomly for the study.

A questionnaire covering various aspects related to counselling, textbooks, opinions and difficulties related to degree project preparation, opinion about study centre support was developed in local language i.e. Marathi. This questionnaire was mailed to all 570 students who passed out the degree programmes in the year 2014. The students were requested to fill up the questionnaire and return it at their earliest.

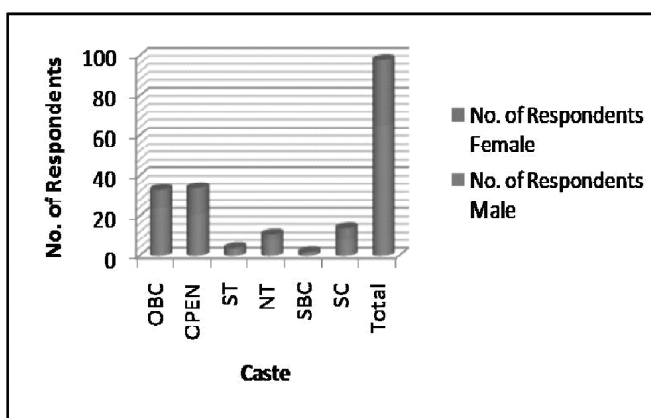
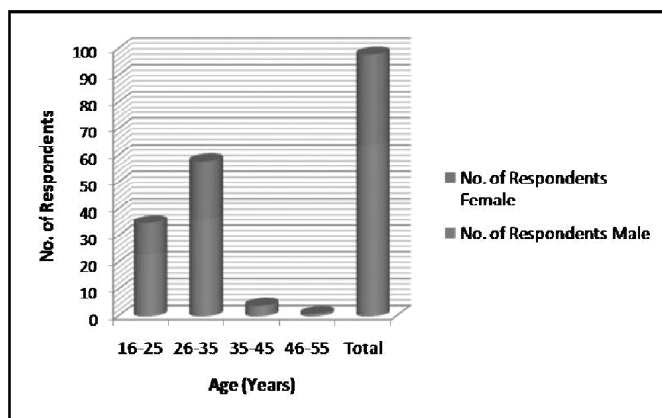
In all 98 students returned the questionnaire well fulfilled and were considered for the study. The description analysis technique has been used to analyze the data. The data obtained from questionnaire is arranged and tabulated in a desired format. The data is analyzed by using simple percentage method.

## RESULTS AND DISCUSSION

### Profile of respondents

The total number of students who had responded to the questionnaire was from agriculture study centres distributed all over Maharashtra State. Out of total 98 respondents 62 were male and 36 were female. Maximum number of the respondents i. e. 59.18% were in the age group of 26-35 years followed by age group 16-25 with 35.71%. Only 5.10% of respondents were having age more than 35 years (Graph 1). It means instead of the adult population, more and more number of younger learners are getting attracted towards the distance education.

It is observed from Graph 1 that 35.71% of the learners were from the open category followed by 32.65% learners from other backward category. 14.28% of learners were from scheduled caste followed by nomadic tribes (11.22%).



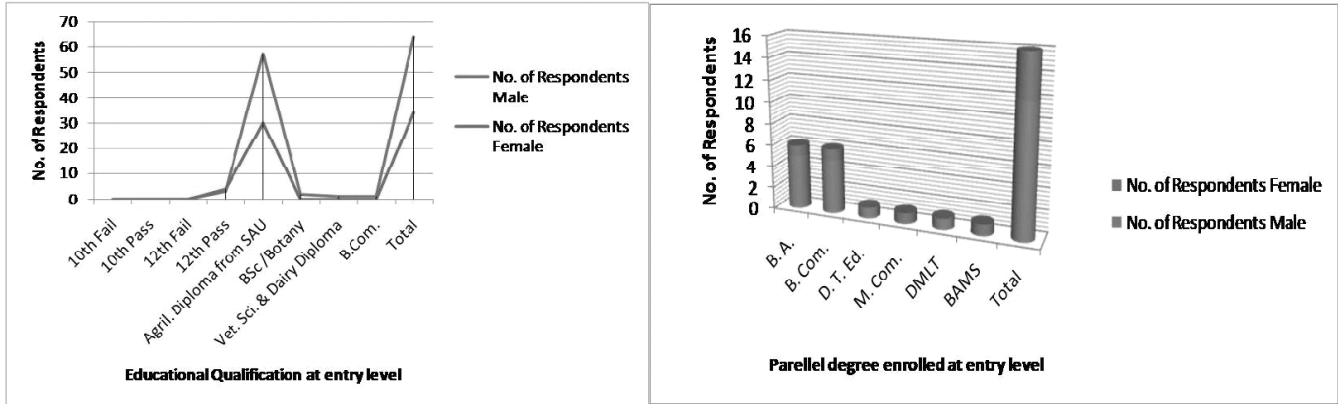
Graph 1 : Distribution of respondents according to age and caste

Regarding the educational qualification of the students before they secure admission to YCMOU agricultural degree programme, it could be seen from Graph 2 that 7.14 % students were having only 12<sup>th</sup> standard passed qualification. It is very significant to know that 88.77% of the students have already completed two year agricultural diploma offered by State Agricultural Universities (SAU) before enrolling YCMOU agricultural degree programme. Only 4.08 % students were having other qualification such as B.Sc. Botany, B.Com. and veterinary science and dairy

diploma. Whereas, 5.10 % of students were having extra qualification such as B. A., B. Sc. Chemistry and B. Com. in addition to agricultural diploma from SAU.

Also it was clear from Graph 2 there were almost 16.38 % students who opted for parallel degree education like B. A., B. Com., D. T. Ed., M. Com., DMLT and BAMS. Perhaps they were of the opinion that the additional degree would be more helpful for them for getting employment in future.

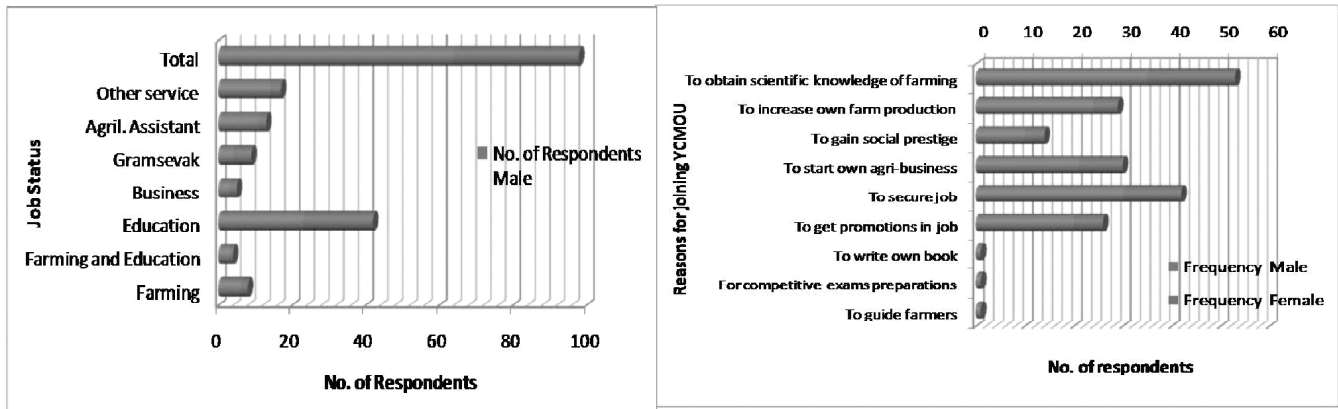
The attempt was made to know the job status before admission to agricultural programmes. It could



Graph 2 : Distribution of respondents as per educational qualification before admission

be noticed from Graph 3 that only 8.16 % of students were engaged in farming while 4.08 % of students were involved in faming alongwith education somewhere else. 42.85 % of students were getting

education in traditional system. It is interesting to note that 39.79% of respondents were already holding the job positions like Gramsevak, Agril. Assistant or some other position.



Graph 3: Job status before admission and reasons for joining YCMOU programmes

**Reasons for joining agricultural programme of YCMOU**

It could be revealed from Graph 3 that to obtain scientific knowledge of farming was the major reason for joining agricultural programme of YCMOU with a frequency of 54.08%. To secure the job (42.85%), to start own agribusiness (30.61%), to increase own farm production (29.59%) and to get promotions in job (26.53%) were other major reasons for joining agricultural programme of YCMOU. A very few learners have reported special reasons like getting scientific knowledge about Tomato crop, to write own book, love to study and liking for farming, for competitive exams preparations and to guide farmers.

**Opinion about YCMOU textbook**

Regarding the opinion of the students about the textbooks, it was found that 12.24% students found

textbooks of Agricultural Foundation programme very difficult. It was considered that Agricultural Foundation is the first year of the degree programme and students securing admission are either 12<sup>th</sup> pass or fail and they have not completed agriculture subject at their school level. Also the textbooks are having difficult principles and processes in basic agriculture. And therefore, naturally, these books were difficult to understand. Same is the case with the textbooks of Diploma in Agro-journalism and Diploma in agribusiness management due to more focus on principles of journalism and economics respectively. Textbooks of Diploma in vegetable production, fruit production and horticulture are not found difficult as they were concentrating on fruit or vegetable production technology and many of the students being farmers or from farmer’s family are familiar with the fruit and vegetable production technology.

Till now, it was a perception that textbooks of Diploma in Floriculture and Landscape Gardening are easy. But this research study has revealed that 19.38 % of the students have reported these textbooks difficult to understand. It may be due to the fact that these books contain many of the exotic flower production technology and principles of landscaping.

Almost 97.95% of the students had said that these books were helpful in their daily work.

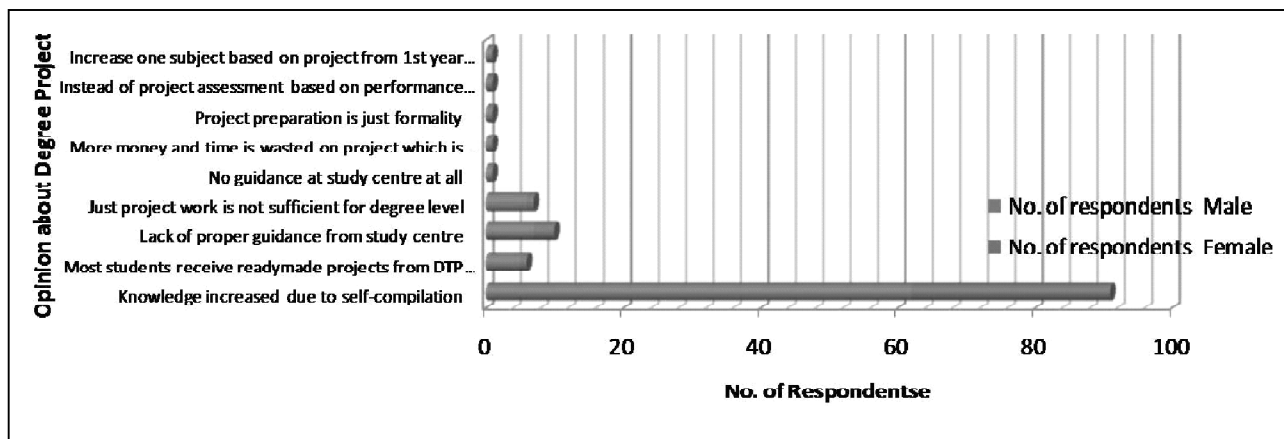
Agricultural foundation programme as well as each diploma programme was having 8 textbooks and 4 workbooks totaling to 12 books. Students were requested to give their opinion about appropriateness of the number of textbooks. 86.73% of students had said that the number of the textbooks were appropriate, 6.12% students reported that number of the books should be reduced while same percent of the students reported that number of the books should be decreased. 96.93% of the students reported that font size used in the textbooks is appropriate. 94.89% of students reported that size of textbooks was appropriate.

### Opinion about Degree Project

Degree project was the unique feature of the degree programme in Agricultural Science. The students who have completed the Foundation programme + any 3 diploma programmes (Diploma in fruit production/ vegetable production/ floriculture and landscape Gardening/ Agro-journalism /Agribusiness management/ horticulture) were allowed to appear for the entrance examination. Those students who clear the entrance examination were allowed to take admission to last year of the degree programme. Students admitting to the last year of the degree programme had to prepare one project. This project is a compilation of information related to any aspect

related to agriculture. It is not a research project. The idea behind this preparation of this project was that the student should get the thorough knowledge of particular crop or technology; he should gain mastery over that area of subject by collecting information on particular topic from various sources like books, journal, internet, actual visits to particular crop fields, and interactions with farmer dealing with that crop/ technology. It was thought that this would thoroughly enrich the student. As a school faculty, it was observed that in earlier years, when enrollment was less for the last year degree programme, the objective kept in mind for preparation of the degree project was really fulfilled. Mainly because there was no/few degree projects were available for reference. After 4-5 years, there were lots of projects available for reference at study centre and at School of Agricultural Sciences, too. And then malpractices began. There was increase in copy cases.

What is student's perception and opinion about this degree project was one of the objectives of this study. Though 92.85 of students have reported that knowledge was increased due to this degree project. 6.12% of the students reported that most students receive readymade projects from DTP centers while 10.20% of the students had said that there no proper guidance from study centre. 7.14% of the students have said that only project work is not sufficient as a year round activity for degree level. Only 1.02% of students have given various other reasons like no project guidance at study centre at all, more money and time is wasted on project which is useless, project preparation is just formality, instead of project assessment should be based on performance in 4 years, 1 subject should be increased based on project from 1st year only, every year small project should be given.



Graph 4 : Opinion about Degree Project

Students were asked whether this degree project should be cancelled and in its place assignment or coursework should be given. Though 53.06% of respondents have refused the cancellation, 30.61% of students have responded positively to the cancellation of degree project.

Regarding the reasons for not cancelling the degree project, enrichment of knowledge due to self-collection of information was of prime importance with frequency of 35.71%. Other reasons given by a few students were - i. deep study increases confidence, ii. students make information available to others, iii. project should be given in 1<sup>st</sup> year and exam based on project every year, iv. increases practical knowledge, v. coursework cannot be completed due to job and house work but project can be done, vi. useful for job and business.

Many times students personally come in School of Agricultural Science and report that they were not aware of project preparation and that was why they had come to the University head quarter to get first-hand information. Therefore, this question was included to know the facts about counselling for degree project. It was very much important to note that 21.42% of students have reported that degree contact sessions were not conducted at study centre. Non availability of guides for degree project was reported by 26.53% of students while 32.65% of students had said that of old degree projects were not available for reference.

### Opinion about study center inputs

Lack of sufficient information from study centre and no in time information from study centre were the two major important opinions (17.34%) from student's side about study centres. Also 14.28% of students had given a feedback that difficulties are not solved at study centre. It was also an important feedback from student's side that copy during exam at study centre needed to be stopped (14.28%). About 9.18% of the students have reported that necessary equipments were not available at study centre. As per the opinion of the 5.10% students no contact sessions were conducted as per schedule and 7.14% students reported that sufficient teacher counsellors are not available at study centre. This is a feedback from student's side and needs to be taken into consideration while planning future educational strategies.

Regarding the contact sessions of agricultural programmes, 67.34% of students have said that number of contact sessions were appropriate whereas 24.48% of students were of the opinion that numbers of contact session should be increased.

Quality of counselling is the most important aspect in distance learning and most of the times it remains overlooked by the educational managers. Though 59.18% of students have expressed that excellent teaching was done by counsellors, 44.98% of students have mentioned that counsellors were not able to solve difficulties. Even 5.10% of students felt that counselors were not having sufficient knowledge. Continuously changing counsellors at study centers might be responsible for the fact. Though the reason unavoidable, these are the alarming responses about the quality of the counselling.

Study centres are the backbone of the distance education system, performance of the study centre is one of the major component upon which depends the success or the failure of particular programme in distance education system. It is interesting to know student's opinion about their study centre after completion of the last year of degree programme. Unfortunately very few students have responded to this question. The reason may that the question was open end or students are yet to finish the degree programme and hence, they were reluctant to say any word about their centre.

### Suggestions for improving B. Sc. (Agri.)/ B. Sc. (Hort.)

Major suggestions were allowing to submit final project copies at study centre, number of guides should be increased, number of centres should be increased, contact sessions should be increased, more guidance for project viva at study centre, more emphasis should be given on the practical instead of textbook knowledge, etc. Though the frequency percentage of every suggestion is very less, it is necessary to take a sincere note of every suggestion. It may not be practically feasible to incorporate each and every suggestion from students side.

### CONCLUSIONS

B. Sc. (Agri.) and B.Sc. (Horti.) degree programme are being offered by School of Agricultural Sciences since 1997 and 2003 respectively and now it is need of the hour to learn the intended and unintended impact of these programmes. It is in general said that most of our learners are getting employed at various establishments all over Maharashtra state and even outside the state. These programmes were intended to increase the employability and farm incomes. The present assessment study would enlighten to what extent the objective of increased employability and farm income has been fulfilled.

In recent years, target group has shifted to young learners. Therefore, it has become more important now to know whether the intended objectives and mandates are still relevant, whether the study material is still relevant, whether the study needs change in its design and format, whether the implementation activities are consistent with objectives, whether the counselors need to be trained differently, whether the programme delivery needs through change, whether examination pattern is suitable, whether the preparation of degree project is necessary, whether the target learners are benefitted in terms of satisfaction and knowledge enrichment, whether the employability objective is fulfilled, etc. It could be concluded from the study that most of the students were satisfied with the degree programme, many have given their corrective suggestions to improve the degree project. Many of students are happy with textbooks, counselling at study centers, degree project preparations, etc. Even then the percentage of students who are trying to convey the message that all is not well at least about the degree project preparation and quality counselling at study center. There is lot of scope in improvement of these two aspects.

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