

Perception of Under Graduate Students (B.Sc.Agriculture) on Instructional Methods

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ABSTRACT

The study was undertaken to identify the effectiveness of different instructional tools as perceived by Under Graduate students of College of Horticulture, Vellanikkara. Field visit/ study tour was rated as the most effective instructional tool by 68 per cent of respondents, followed by practical classes in the field. The frequency of use of different instructional methods during the current semester was found out. Practical classes in the laboratory were the most frequently used aid followed by lecture using power point. More field visits should be included within the time limit together with field practicals and work experiences to ensure maximum learning experience to students.

In the new era of technology, every aspect of human life is changing from traditional to innovative methods. This has been reflected in the case of instructional technology also. Formal education has long been dominated by the traditional lecture, where the learned few impart wisdom to the passive masses through well-conceived but oftentimes long and dry oratories (Davies *et al.*, 2013). It was noted that faculty have tended to rely on lectures and readings from texts that culminate with a final exam to measure achievement (Lowerison *et al.* (2006). As a result, the student may essentially be a passive recipient of information, raising concerns that the focus is more on mere learning whereby students only memorize facts in preparation for tests, not in actual field situations. Many new tools and methods are used now to increase the effectiveness of teaching and to improve the comprehension

of students, in addition to the traditional lecture method.

This study examines the perceptions of Under Graduate students on different instructional tools in their learning and knowledge gain. Various tools are used to suit the requirements of specific learning situation and the expertise expected out of it. The confidence level of teachers are improved using different instructional technologies as they can explain difficult concepts and complex functions using effective instructional tools. In this context, the present study was formulated with the following objectives:

- (1) To study the effectiveness of different instructional tools as perceived by Under Graduate students, and
- (2) To observe the frequency of use of different instructional methods in undergraduate teaching

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METHODOLOGY

The study was taken up during the year 2013-14. The students who were undergoing B.Sc.Agriculture course at College of Horticulture, Vellanikkara under Kerala Agricultural University, formed the subjects of the study.

Respondents were selected from among the list of students in the first year and final year B.Sc. Agriculture students. Thirty two students each were selected from these two batches of under graduate students in College

of Horticulture. The data collected were tabulated and statistical tools like frequency and percentage were used for logical conclusion.

FINDINGS AND DISCUSSION

1. Gender

The profile of students revealed that about 19 per cent of first year students taken for study were male and 81 per cent were female. Thirteen per cent of final year students

Table 1.
Distribution of Students based on Gender

(n = 64)

Items	Male	Percentage	Female	Percentage
I year	6	19	26	81
IV year	4	13	28	87
Total	10	16	54	84

sampled in this study were male and 87 per cent female. The combined sample consists of 16 per cent male and 84 per cent female students.

2. Marks secured

Marks secured by students during their last semester of study were documented.

About 44 per cent of the students secured marks below 80 per cent, whereas 20 per cent of them secured 81 to 85 per cent marks. An equal percentage (20%) of them scored marks between 86 and 90 per cent. Sixteen per cent of them scored marks above 91 per cent.

3. Opinion about effectiveness of each instructional method

Twenty one different instructional methods were listed out and the perception of students on the effectiveness of each item was sought. The students were requested to mark their responses on a five point continuum- least effective, less effective, neutral, effective and most effective which were assigned scores of 1,2,3,4 and 5 respectively.

A perusal of the table 3 showed that field visit/ study tour was rated as the most effective instructional tool by the respondents (68 per cent). This was followed by practical

Table 2.
Distribution of Students based on Marks Secured (in percentage) (n = 64)

Items	Below 80	81 to 85	86 to 90	91 and above
I year	25	9	34	31
IV year	63	31	6	-
Total	44	20	20	16

classes in the field (61 per cent), work experiences (54 per cent), demonstrations (51 per cent), practical classes in the lab (31 per cent), brainstorming (28 per cent) and workshop (28 per cent). Question answer session was perceived as the most effective

Table 3.
Effectiveness of Different Instructional Methods (in percentage) (n = 64)

Sl. No.	Instructional methods/ tools/ aids	Responses in the highly effective category		Total (%)
		I year (%)	IV year (%)	
1	Lecture without any aid	0	0	0
2	Lecture using chalk board and or white board	19	9	14
3	Lecture using power point	13	25	19
4	Lecture using OHPs	0	6	3
5	Question answer sessions	25	25	25
6	Presentation by students	3	16	10
7	Use of multimedia	3	25	14
8	Assignments	0	6	3
9	Seminars	0	6	5
10	Conferences	0	9	5
11	Team projects	16	19	17
12	Demonstrations	44	59	51
13	Brainstorming	28	28	28
14	Using internet for literature search	16	25	20
15	Practical classes in the lab	16	47	31
16	Practical classes in the field	38	84	61
17	Work experiences	44	66	54
18	Field visit/ study tour	63	75	68
19	Workshop	9	47	28
20	Case study	22	28	25
21	Role play	16	22	19

tool by 25 per cent, an equal per cent of students preferred case study. This was followed by using internet for literature search (20 per cent), role play (19 per cent), lecture using power point (19 per cent) and team projects (17 per cent). None of the students preferred lecture without any aid.

A thorough look into the table reveals that first year students and final year students vary in their perception on effectiveness of different instructional tools. About 63 per cent of the first year students perceived field visit/ study tour as the most effective instructional tool followed by demonstrations (44 per cent) and work experiences (44 per cent). Practical classes in the field were preferred by 38 per cent of first year students followed by brain storming (28 per cent) and case study (22 per cent).

About eighty four per cent of the final year students perceived practical classes in the field as the most effective instructional tool. Seventy five per cent of them preferred field visit/ study tour as the most effective instruction aid followed by work experiences (66 per cent), demonstrations (59 per cent), practical classes in the lab (47 per cent) and workshop (47 per cent). None of them preferred lecture without any aid.

4. Frequency of use of different instructional methods

The students were asked to indicate how frequently per semester the technologies were used to support teaching and learning during current semester.

Scale : Never used during semester

Seldom used (less than 10% of class sessions)

Occasionally used (less than 50% of class sessions)

Frequently used (more than 50% of class sessions)

Never, Seldom, Occasionally and frequently were given scores of 1, 2, 3 and 4 respectively.

The table 4 depicts the frequency with which students perceive the use of specific technology by their teachers. Concerning the lecture without any aid, 25 per cent of first year students perceive this technology is used more than 50 per cent of class sessions while none of the final years reported the same. Similarly, 44 per cent of first year students perceived lecture using chalk board/ black board is used more than 50 per cent of class sessions while final years perceived it to be 28 per cent. In the case of lecture using power point the figures were 38 per cent and 75 per cent respectively. About 22 per cent of first year students and 34 per cent of final year students perceived "Use of multimedia" as more than 50 per cent of class sessions. The percentage of doing assignments was higher for both groups: 50 per cent and 53 per cent for first year students and final year students respectively. Sixteen per cent of first year students perceived 'Seminars' to be used more than 50 per cent in contrast to final year students (22 per cent). There was commendable difference in the perception of team projects by first year students (3 per cent) and final year students (19 per cent).

Table 4.
Frequency of Use of Instructional Methods (in percentage) (n = 64)

Sl. No.	Instructional methods/ tools/ aids	More than 50 % of class sessions (in percentage)		Total (N = 64)
		I year (n=32)	IV year (n=32)	
1	Lecture without any aid	25	0	13
2	Lecture using chalk board and or white board	44	28	36
3	Lecture using power point	38	75	56
4	Lecture using OHPs	6	13	9
5	Question answer sessions	16	6	11
6	Presentation by students	9	50	30
7	Use of multimedia	22	34	28
8	Assignments	50	53	52
9	Seminars	16	22	19
10	Conferences	3	6	5
11	Team projects	3	19	11
12	Demonstrations	13	6	9
13	Brainstorming	9	9	9
14	Using internet for literature search	9	28	19
15	Practical classes in the lab	81	75	78
16	Practical classes in the field	53	47	50
17	Work experiences	9	38	23
18	Field visit/ study tour	13	38	25
19	Workshop	6	3	5
20	Case study	3	0	2
21	Role play	3	6	5

Similarly 'Using internet for literature search was perceived differently by first year students (9 per cent) and final year students (28 per cent). The highest percentage was observed in the case of practical classes in lab: 81 per cent by first year and 75 per cent by final year students. Fifty three per cent of first year students perceived 'practical classes in the field' in more than 50 per cent of class sessions while 47 per cent of final year students

perceived the same. There was difference among first year students (9 per cent) and final years (38 per cent) in the case of work experiences also. Thirteen per cent of first years and 38 per cent of final years perceived field visits/ study tours in more than 50 per cent of class sessions.

The combined percentage of first year students and final year students (78 per cent)

indicated that practical classes in the lab was perceived to be used more than 50 per cent of class sessions. It was followed by lecture using power point (56 per cent), assignments (52 per cent), practical classes in the field (50 per cent), lecture using chalk board/ white board (36 per cent), presentation by students (30 per cent), use of multimedia (28 per cent), field visit/ study tour (25 per cent), work experiences (23 per cent), seminars (19 per cent) and using internet for literature search (19 per cent).

CONCLUSION

The study attempted to list out all possible instructional methods/ tools which are presently used in Under Graduate teaching at College of Horticulture, Vellanikkara. Students' perception on effectiveness of different teaching aids was found out by ranking different instructional aids. Field visit/ study tour was rated as the most effective instructional tool as the students get familiarized with crops and cropping patterns which they have not seen before. This was

followed by practical classes in the field and work experiences where the students get first hand experience of crops and problems in actual field. The frequency of use of different instructional aids was also found. The students reported that practical classes in the laboratory were most frequently used followed by lecture using power point and giving assignments. Teachers can remodulate their teaching in a way that there is a perfect balance between field visits, practical classes and class lectures so that the students get maximum benefit out of their learning experiences.

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