



Short communication

Differential awareness about components of agriculture among students in Kerala

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Abstract

Urbanization, better literacy standards and greater skill attainment has moved the younger generation away from agriculture. This is all the more pronounced in Kerala, the state with highest degree of urbanization in India. The students as the next generation of consumers, should be on the focus of the educational efforts regarding agriculture and food processing because, the political and social decisions of the today's students will have the power to change the agricultural industry. In this context, the current study attempted to analyse the awareness level of higher secondary school students from state and CBSE syllabus on agriculture. The results showed that only 17 per cent of the students had high awareness on the components of agriculture. There existed huge variation in the awareness level of students from rural and urban background and also between students under state and CBSE streams of education. The students exhibited highest awareness level on the crops grown in Kerala whereas the lowest level of awareness was recorded for the food security component. A clear cut diminishing pattern of ranks from Rural state – Rural CBSE –Urban state – Urban CBSE with regard to awareness on agriculture was obtained in Kruskal Wallis test.

Keywords: Awareness about agriculture, Backgrounds, Different syllabi, School students.

In today's highly technological, urbanized world there is less priority placed on agriculture in the school system (Holloway, 2004). Ironically, as the cities grow, we see higher demands placed on the shrinking farm. Today's urban children often lack the opportunity to learn about farming, or how the science of agriculture affects them daily (White, 2012). Confined within the strict schedules of classes, structured activities and tuitions, children today seem to be far away from the primary activity for man's survival, namely growing of food.

In India, children get hardly any exposure to agriculture through a curriculum predominated by arts and science. Earlier this did not matter much, as Indian lifestyles were solidly embedded in an agricultural background. This is all the more

pronounced in Kerala, the state with highest degree of urbanization in India. The decadal rate of urbanization in Kerala is estimated to be 82 percent (GOI, 2011). Even children from rural areas seem to be unfamiliar with the basics of agriculture. Experience from the ongoing RKVY project initiated by KAU in 2010, on boosting vegetable production through technology dissemination for food and nutritional security, which had a component of establishing nutritional gardens in selected schools of the state, reinforced this information. There have been attempts from the part of the Government to inculcate the spirit of agriculture in the younger generation, but many of these attempts have failed to give desired results. In this context a study was conducted with the aim of bringing out the awareness status and perception

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of school students on agriculture. This paper analyzes the awareness of school children in Kerala on various components of agriculture.

This cross sectional study employed exploratory research design, and was conducted in Alappuzha and Thrissur districts of Kerala. These two districts were selected specifically so as to obtain a representative sample of the central and southern Kerala. From each district, one urban school each with CBSE and state syllabus and one rural school each with CBSE and state syllabus were selected. Thus a total of eight schools were selected. The students of plus one class were selected from each of these schools as respondents. From the selected eight schools, the entire students of one division, randomly selected, formed the respondents. Thus, three hundred and ninety three students were surveyed.

A pre tested, structured interview schedule with 50 questions including open-ended questions, yes/no questions and multiple choice questions were used to collect data. These questions covered basic awareness on crops, its production, processing, plant protection and aspects of agribusiness. The sample population was classified into categories of high, medium and low awareness based on mean and standard deviation as given in Table 1. Further, the results were analysed using descriptive statistics, ANOVA and Kruskal Wallis test for comparison among groups.

Based on the location of the school and the syllabus of the academic curriculum, the awareness level of student respondents on the crops commonly grown in Kerala is given in Table 2.

It was found from Table 2 that there exists huge variation in the awareness level of students from rural and urban background and also between students from state and CBSE syllabus. Regarding the crops grown in Kerala, 71.87 per cent of the students under state syllabus in rural areas exhibited high level of awareness whereas nearly 28 per cent had medium awareness. It was also noted that while 94.23 per cent of the students under state syllabus from urban areas exhibited medium awareness, none of the sampled respondents exhibited high awareness level. Only 1.02 per cent of the students from rural CBSE school exhibited high awareness on crops commonly grown in our state, while a majority amounting to 66.32 per cent of the urban CBSE school students were found to have low awareness regarding the crops grown in Kerala.

The difference in awareness between the different categories of students could be best explained in terms of the syllabus followed by the respective streams and the socio-economic setting from which they hailed. The Kerala curriculum framework envisaged that every child should gather a comprehensive idea about agriculture, bio diversity and ecosystem by the end of upper primary stage using activity based modules of learning. The awareness of CBSE students regarding agriculture is mostly limited to the science exhibitions, featuring agriculture as a subtopic. Frick et al., (1995) in a study done in U.S.A, also reported that respondents from smaller cities and towns with rural background were found to be more knowledgeable than their counterparts from larger population urban centers regarding agriculture.

On comparing the awareness of students

Table 1. Classification of respondent groups to categories having high, medium and low awareness based on mean and standard deviation

Values	Range (Scores)	Category
\geq mean	(\geq mean + standard deviation)	High
Between	(\geq mean + standard deviation) + (\leq mean – standard deviation)	Medium
\leq mean	(\leq mean – standard deviation)	Low

Table 2. Classification of school students based on location and syllabus scheme [N =393]

Category	Range(score)	Frequency	Percentage
Students in state syllabus – Rural			
Low awareness	≤ 18.74	0	0
Medium awareness	18.75 - 31.88	27	28.13
High awareness	≥ 31.89	69	71.87
Total	96		100
Students in state syllabus – Urban			
Low awareness	≤ 18.74	6	5.77
Medium awareness	18.75 - 31.88	98	94.23
High awareness	≥ 31.89	0	0
Total	104		100
Students in CBSE syllabus – Rural			
Low awareness	≤ 18.74	10	10.20
Medium awareness	18.75 - 31.88	87	88.78
High awareness	≥ 31.89	1	1.02
Total	98		100
Students in CBSE syllabus – Urban			
Low awareness	≤ 18.74	63	66.32
Medium awareness	18.75 - 31.88	32	33.68
High awareness	≥ 31.89	0	0
Total	95		100

Table 3. Comparison of awareness of students undergoing different syllabi in rural and urban locations on agriculture

CD for comparing schools/ awareness each averaged over the other- 0.031

School	Mean awareness score
RSD1	0.871
USD1	0.866
RCD1	0.655
UCD1	0.617
RSD2	0.631
USD2	0.610
RCD2	0.468
UCD2	0.466

[*RSD1- Rural State Syllabus School of District 1, RSD2- Rural State Syllabus School of District 2, USD1- Urban State Syllabus School of District 1, USD2- Urban State Syllabus School of District 2, RCD1- Rural CBSE Syllabus School of District 1, RCD2- Rural CBSE Syllabus School of District 2, UCD1- Urban CBSE Syllabus School of District 1, UCD2- Urban CBSE Syllabus School of District 2

**District 1- Alappuzha, District 2- Thrissur]

undergoing different syllabi in rural and urban locations on various components of agriculture using ANOVA (Table 3), it was found that students exhibited the highest mean value on the crops grown in Kerala (1.686), and the lowest awareness level was found to be for the components on food security (0.349). This could be explained with the reason that the respondents were fairly familiar with the major crops cultivated in Kerala when compared to other components like planting material of crops, land preparation, fertilizer application etc. Even the term 'food security' may be a new one to the students as Kerala.

As evident from Table 3, the awareness level of students varied from school to school. The rural and urban state syllabus school of Alappuzha district has the highest mean value on awareness with non-significant CD. The rural CBSE school and urban CBSE school of Alappuzha, along with the rural state syllabus school and urban state syllabus school of Thrissur fall in a group with non

significant CD for mean values on awareness. Their mean values are also lower than the first group. The rural CBSE and urban CBSE schools of Thrissur have the lowest mean values with non significant CD.

This indicates a clear cut pattern, which actually demarcates the students of these two districts as being very different in their awareness about agriculture. Alappuzha, being the less urbanized district than Thrissur, had students with highest awareness on agriculture, especially the state syllabus students. Rural and urban divide was not significant in the case of awareness. Students from CBSE syllabus school, in Alappuzha district, whether from rural or urban background, had lower awareness than the state syllabus students. The rural and urban state syllabus school students from Thrissur district fell on par with them. This can be explained on terms of the urbanisation level of these districts as well as the difference of the students under state and CBSE syllabi. State syllabus students were found to be better in awareness about agriculture than the CBSE students.

The rural and urban CBSE students of Thrissur had the lowest awareness about agriculture among the lot, and the mean values showed non-significant CD. Looking at the whole picture, it can be deduced it is the education stream that shapes the students awareness on agriculture than their home location. Apart of the area from where the students are coming, system of education also influences and shapes students information about key matters. In the erstwhile state syllabus, stress is given for hands

Table 4. Comparison of mean ranks among students from different syllabus streams and locality.

Type of school	Mean rank
State syllabus, Rural schools	345.21
State syllabus, Urban schools	201.56
CBSE syllabus, Rural schools	180.64
CBSE syllabus Urban schools	59.11

* $\chi^2(3) = 306.179, p = 0.0001$

on exposure of the students on nature oriented activities, social experiments and it gives great importance to project based learning. These activities might have paved the way for familiarization of the students with aspects of agriculture as well, much better than the students from CBSE syllabus which follows more of a subject matter oriented instruction pattern.

The table above (Table 4) shows how the awareness level of students varied according to the syllabus stream in which they studied and also their locality. The Kruskal-Wallis test showed that there was a statistically significant difference in the awareness level of students from different types of schools, as is evident from the mean rank of 345.21 for rural schools under state syllabus, 201.56 for urban schools under state syllabus, 180.64 for rural schools under CBSE syllabus and 59.11 for urban schools under CBSE syllabus.

The results t revealed that the students from rural schools following state syllabus ranked first on comparing the mean value of awareness followed by those from rural schools following CBSE syllabus. The clear cut diminishing pattern of ranks from Rural state – Rural CBSE – Urban state – Urban CBSE is an eye opener in that it reinforces our hypothesis of the rural state schools still being the best place for students to be get a good orientation towards agriculture. Ellibee (1990), also reported that urban students have little interaction with agriculture, which inhibits their perception and knowledge of agriculture compared to their rural counterparts. Even being in urban area, the students under state syllabus had high mean rank on awareness, which is an indicator that the CBSE syllabus should consider inclusion of hands on exposure and project based learning among students, to ground them more towards agriculture and nature related activities. This is all the more reinforced, as the students from rural areas under CBSE stream ranked only below the students from urban schools following state syllabus. Pense et al., (2006) reported similar views in his study

comprising Illinois twelfth grade students, where more agricultural knowledge was found for students living in rural areas (versus urban) and among students enrolled in experiential learning based programmes in agriculture (versus those who were not enrolled in these programs).

The study came up with very significant results which underlined the rural urban divide among the young generation regarding awareness about agriculture. It also equally substantiated the lower exposure obtained by students on agriculture and nature oriented aspects in the CBSE stream of education which points to the necessity of re orienting the young generation towards agriculture.

References

- Ellibee, M. 1990. Theme: Urban Agriculture. Agric. Educ. Mag., 63(4) : 4-6
- Frick, J.M., Birkenholz, R.J., Gardner, H. and Machtmes, K. 1995. Rural and urban inner-city high school Student knowledge and perception of agriculture. *J. Agric. Educ.*, 36(4): 1-9
- GOI [Government of India]. 2011. State Urbanisation Report: Ministry of Housing and Urban Poverty Alleviation. Available: <http://www.mhupa.gov.in> [10 May 2015]
- Holloway, L. 2004. Showing and telling farming. Agricultural shows and re imaging British agriculture. *J. of Rural Stud.*, 2: pp 319-330.
- Pense, S.L., Beebe, J.D., Leising, J.G., Wakefield, D.B. and Steffen, R.W. 2006. The agricultural literacy of urban/ suburban and rural twelfth grade students in five Illinois high schools: An ex post facto study. *J. South. Agric. Educ. Res.*, 56: 5-15.
- White, B. 2012. Agriculture and the generation problem: rural youth, employment and the future of farming. In: Sumberg J, Wellard K (eds), *Young people and agriculture in Africa*. IDS Bulletin, pp 9-19.