
**STUDY ON ATTITUDE AND PERCEPTIONS OF AGRICULTURAL
UNDERGRADUATE STUDENTS OF BU ALI SINA UNIVERSITY TOWARD
AGRISCIENCE**

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Abstract

This study is an attempt to provide planners of agricultural higher education in Iran with an assessment to show the attitude of agricultural undergraduate students toward agriscience. It is, thus, an applied research using survey and correlation methodologies. The statistical population consists of undergraduate students of agricultural fields in Bu Ali Sina University between 2001-2005 years. 120 sample population of relevant students was selected randomly, out of total 800 statistical population. Literature review has been employed for data gathering, with questionnaire as research tool. Descriptive results of this study showed that 74 percent of respondents were female and 26% male. Only 8 percent of students were living in village. Before admission in the agriscience, extent of students' interest was moderate, in case it is increased after entrance to the agricultural faculty. Results of this research revealed that about 90 percent of target undergraduate students have agreed to agriscience by positive attitude (18%=moderate agreed, 67%=entirely agreed). On the other hand, only 15 percent of them have been disagreed to agriscience by negative attitude.

Introduction

Trends and attitudes of agricultural students at university level have undergone major changes over the past decades in Iran. In spite of disinterest of students for enrollment to higher agricultural fields in past decades (Hejazi, 1986; shahvali, 1988) recently, we can see increasingly growth of these students in Iran (Zamani, 2005; movahedi, 2003).

Increasing the enrollment of agricultural students can take place based on different reasons. Osborne and Dyer (2000) in a study on Illinois agriscience students indicated that parents of the students and their teachers in high school agriculture play the important role for students' enrolment on colleges of agriculture. Dyer, Breja and Andreasen (1999) on the nearly same study stated that students who had completed high school agriculture courses, they had more positive attitudes toward university agriculture and agriculture as a career and the most influential person in their decision to attend the College of Agriculture was their high school agriculture teacher. The problem addressed by this research are what factors and reasons

influence on student's perception that they select agriculture as a field of study and career choice and also how to identify and retain students who have positive attitudes toward a subject. Fishbein, Ajzen (1975), Greenwald (1989), and Rafipour (1992) provide the theoretical framework for this study. Greenwald (1989) reported that individuals with positive attitudes toward a subject or situation tend to evaluate them positively. Rafipour (1992), On the other hand, has designed a model for assessing attitude of villagers toward Ministry of Jihade-Sazandegi(responsible for rural development affairs) in Iran.

Purpose

The purpose of this study was to identify perceptions of agricultural undergraduate students for selecting agriculture as a study field in Bu Ali Sina University of Iran.

The following questions as research objectives are addressed:

1. What are the attitudes of BASU undergraduate students toward agriculture as a study field?
2. What are the most important factors affecting on perceptions of BASU undergraduate students for selecting agriculture as a study field?
3. What is relationship between the demographic and individual variables and the attitudes of BASU undergraduate students toward agriscience?

Methods

A survey research design is used in this study by using correlation, descriptive, and comparative analysis as data processing methods. The target population includes undergraduate students enrolled to agro science in Bu Ali Sina University from 2001 through 2005. Out of total 800 statistical populations, 120 sample populations of relevant students were selected randomly. Literature review has been employed for data gathering, with a questionnaire as research tool. Independent variables in the study included gender, average of diploma, location of birth (city/village), living location, background on agriculture, interest and willing toward agriscience and father's job. The only dependent variable in this research study was the attitude toward agriscience.

Content and face validity of the instrument was established by a panel of experts consisting of both faculty members and education specialists who had expertise about agricultural extension and higher education studies. Reliability for the scales were estimated by calculated a Cronbach's alpha coefficient on pilot study data. Reliability for the scales ranged from 82 to 93. Some statistics include frequency distribution tables, valid percent, mean, variance and standard deviation has been used in order to describe data. A number of correlation coefficients were used for analytic relations among variables. Spearman and Kendall's rank correlation coefficient were calculated for explore relationships between the demographic variables of gender, living location, Location of birth(city/village),experience on agriculture, interest toward agriscience and attitude of respondents toward agriscience. A Pearson correlation coefficient was calculated to explore relationships between the average of diploma and attitude of respondents toward agriscience. In this research two nonparametric tests; Mann-Whitney U and Kruskal-Wallis H are utilized for comparing means about two hypotheses.

Results and Findings

Descriptive results of this study showed that 74 percent of students were female and 26 percent male. The mean age of respondents was 20.6 years. Only 8 percent of students were living

in village. The average of respondents' diploma at high school (G.P.A.) was 17.41 out of 20.00. About 15 percent fathers's job of respondents was agriculture and depended to agriculture. Before admission to the agricultural fields, mean amount of students' interests toward agriculture out of 5 was 2.7, in case it is increased (M=3.8 out of 5) after enrollment to the agricultural faculty. Students were asked to indicate the amount of farming experience that they had. Amount of farming experience ranged from 1 to 5 by Likert type scale (M=1.8 out of 5).

Objective One: *Attitude of BASU agricultural undergraduate students toward agriculture.* To achieve this objective, students were asked to respond to a series of Guttman type questions about their attitude toward agriculture. Responses ranged from 1 disagree to 3 agree. Of the 7 questions asked, four of the items (1, 3, 5, 6; see table1) should be transform reverse coded. After transforming reverse coded items, results revealed that about 90% of target undergraduate students have agreed to agriscience by positive attitudes (18%=fairly agreed, 67%=entirely agreed). On the other hand, only 15 percent of them have been disagreed to agriscience by negative attitude.

Table 1. Assessment of students' attitude toward agriculture (N=120)

Items	Questions	agree	fairly	disagree	SD	M*
		%	%	%		
1	<i>Agriscience is useless and unimportant</i>	12.5	16.7	70.8	0.60	2.15
2	<i>Agriscience is necessary for agricultural and rural development</i>	87.5	9.2	3.3	0.84	2.36
3	<i>I think I don't learn useful knowledge in agriscience</i>	40	28.4	31.6	1.17	1.59
4	<i>Agriscience is essential for food production</i>	83	12.7	4.2	0.80	2.32
5	<i>I think Agriscience has really no application and efficiency</i>	10	11.8	78.2	1.10	2.23
6	<i>Agriscience programs not adjust for real needs of people</i>	28.2	27.4	44.4	1.20	1.80
7	<i>I am ready for purchasable/monetary help, If agriscience may be eliminated</i>	61.6	21.7	16.7	1.10	2.02
	<i>Average</i>	67	18	15	0.97	2.1

$1 \leq m^* \leq 3$; $1.5 \leq m$: positive attitude

Objective Two: *Factors affecting on perceptions of BASU undergraduate students for selecting agriculture as a study field.* To achieve this objective, target students were asked to respond to a series of Likert type questions about their perception for selecting agriculture as a study field. Responses ranged from 1 very weak to 5 very much. Results indicated that eligibility for continuing study on graduate courses (M=3.29 out of 5), Importance of agriculture in Iran (M=3.20 out of 5), more probability achievement in agro science (M=2.91 out of 5) and Interest and willing toward Agriculture (M=2.83 out of 5) are the most important reasons for selecting agriscience. table2 shows ranking items of mentioned factors by mean score.

Table 2. Ranking factors for selecting agriculture as a study field by BASU undergraduate students (N=120).

<i>Ranks</i>	<i>Items</i>	<i>M</i>	<i>SD</i>
1	<i>Eligibility for continuing study on graduate courses</i>	3.29	1.14
2	<i>Importance of agriculture</i>	3.20	1.09
3	<i>More probability achievement in agriscience</i>	2.91	1.13
4	<i>Interest and willing toward agriculture</i>	2.83	1.22
5	<i>Limitation for admission in other study fields</i>	2.82	1.30
6	<i>Before experience on agriculture</i>	2.75	1.18
7	<i>Putting soldiering off</i>	2.61	1.43
8	<i>For acquisition diploma on agriculture</i>	2.59	1.37
9	<i>Acquiring more income after graduation</i>	2.53	1.14
10	<i>Use from aids of Agricultural organizations</i>	2.40	1.33
11	<i>Interest toward working on rural areas</i>	2.30	1.37
12	<i>High school and TV programs about agriculture</i>	2.29	1.45
13	<i>Banking supports Such as loan for agricultural graduations</i>	2.27	1.22
14	<i>Only for engineering title on agriculture</i>	2.24	1.26
15	<i>Order of Parents and relatives</i>	2.18	1.11
16	<i>Public sector supporting from agricultural graduates</i>	2.11	1.32
17	<i>Vicinity of agricultural faculties units to living location</i>	2.05	1.34
18	<i>Various numbers of agricultural faculties units</i>	2.00	1.24
19	<i>Simplicity and easiness for studying on agricultural curricula</i>	1.91	1.40
20	<i>Order of teacher and advisors in high school</i>	1.84	1.09

Very weak= 1, weak= 2, medium= 3, much= 4, very much= 5

Objective Three: *Relationship between the demographic and individual variables and the attitudes of BASU undergraduate students toward agriscience.* Analytical findings of this study indicated that there is significant statistical relation between variables. In order to conduct this analysis, a number of correlation coefficients were calculated. Spearman and Kendall's rank correlation coefficient were calculated for explore relationships between the demographic variables of gender, living location, location of birth(city/village), experience on agriculture, interest toward agriculture and attitude of respondents toward agriscience. A Pearson correlation coefficient was calculated to explore relationships between the average of diploma and attitude of respondents toward agriscience. Results showed high significant correlations between the average of diploma and the dependent variable ($r=0.60;p=0.00$) but moderate significant correlations between the gender, living location, location of birth(city/village),experience on agriculture, interest toward agriculture and attitude of respondents toward agriscience (see table3).

Two nonparametric tests; Mann-Whitney U and Kruskal-Wallis H were utilized for comparing the means. In this part of the study, the Mann Whiney nonparametric test showed that there was significant difference between the mean attitude of male and female(x1,x2) students toward agriscience. For testing difference among the three groups of respondents (who father's

job was agriculture, who father's job was concerned to agriculture and who father's job was not agriculture), the Kruskal Wallis test showed no significant difference among these groups at the 0.05 level.

Table 3. Results of assessing correlations and comparing groups.

<i>Independent variable</i>	<i>Dependent variable</i>	<i>Test</i>			
			<i>R/U/χ</i>	<i>Sig.</i>	<i>P</i>
<i>Gender</i>	<i>Attitude toward agriscience</i>	<i>Spearman</i>	<i>R =0.24</i>	<i>0.016</i>	<i>P<0.05</i>
<i>Average of diploma</i>	<i>Attitude toward agriscience</i>	<i>Pearson</i>	<i>R=0.60</i>	<i>0.00</i>	<i>P<0.01</i>
<i>Living location</i>	<i>Attitude toward agriscience</i>	<i>Spearman</i>	<i>R =0.23</i>	<i>0.02</i>	<i>P<0.05</i>
<i>Location of birth(city/village)</i>	<i>Attitude toward agriscience</i>	<i>Spearman</i>	<i>R =0.21</i>	<i>0.04</i>	<i>P<0.05</i>
<i>Experience on agriculture</i>	<i>Attitude toward agriscience</i>	<i>Kendall's tau c</i>	<i>R =0.29</i>	<i>0.003</i>	<i>P<0.01</i>
<i>Interest and willing toward agriculture</i>	<i>Attitude toward agriscience</i>	<i>Kendall's tau c</i>	<i>R =0.22</i>	<i>0.032</i>	<i>P<0.05</i>
<i>Mean attitude of father's job(x1,x2,x3)</i>	<i>Attitude toward agriscience</i>	<i>Kruskal-Walis H</i>	<i>χ =3.50</i>	<i>0.62</i>	<i>P>0.05</i>
<i>Mean attitude of male and female(x1,x2)</i>	<i>Attitude toward agriscience</i>	<i>Mann-Whitney U</i>	<i>U=770</i>	<i>0.045</i>	<i>P<0.05</i>

P = (P≤0.05) R=correlation coefficient, U= Mann-Whitney U coefficient, χ =chi-square

Conclusions and Recommendations

Based on the finding of this study, the following conclusion were drawn and recommendation given. In describing features of agricultural undergraduates of BASU, it was found that more than two third of the students were female. Only a few students were living in village .the average of diploma for respondents was very good. The agricultural undergraduates of BASU had low experience on agriculture.The results of this study indicated that target undergraduate students agreed to agriscience by positive attitudes. In this research four important factors have been ranked by respondents for selecting agriscience include eligibility for continuing study on graduate curses, Importance of agriculture in Iran, more probability achievement in agriscience and Interest toward Agriculture, respectively. Therefore, the recommendation can be made that the Higher Agricultural Education Centers in Iran can use this information in order to conduct new plans and programs for enrolment agricultural students in university units.

In determining relationships between independent variables and attitude of the agricultural undergraduates toward agriscience , a positive relationships were found between the students which were female, had higher average of diploma, were living in village, their location of birth were in village , had more farming experience and had more interest toward agriculture. Therefore, the conclusion can be made that the curriculum developers and decision makers of Iran should take in to consideration these student characteristics for future planning.

In comparing the two groups of agricultural students (female and male), it was found that female students had more attitude toward agriscience. Therefore, curriculum developers on agriculture in Iran should develop and adjust new curricula for female students. In addition, agricultural organizations both in public and private sectors should create new job position and increase job opportunities for female graduates.

Educational Importance

This study is an attempt to provide planners of agricultural higher education in Iran with an assessment to show the attitude of agricultural undergraduate students toward agriscience. Results of this study can assist agricultural educators and planners in determining the effectiveness of science applications in agriculture as a tool in influencing attitudes and in attracting students to agricultural programs. Also we can use positive attitude of students for strengthening quality of education in agriculture and may enhance efforts to recruit students into the relevant agricultural careers and postgraduate programs in agriculture. For improving curriculum development for agricultural students, colleges and universities we need to find out student's interests, gender and experience on agriculture. Based of findings of this study we can understand which reasons for agricultural students are important and which one is no important and then strengthen advantages and remove weaknesses for agriscience.

References

- Ajzen, I.(1998). *Attitudes, Personality and Behavior*. Milton Keynes: Open University press.
- Dyer J.E., Breja, L.M., & Andreasen, R. J. (1999). Attitudes of college of agriculture freshmen towards agriculture. *Journal of Agricultural Education*, Vol. 40 Issue 2.
- Fishbein, M.S., Ajzen, I. (1975). *Beliefs, Attitudes, Intentions, and Behaviors*. Reading, MA: Adios- Westey publishing company.
- Greenwald, A. G. (1989). Why attitudes are important: Defining attitude and attitude theory 20 years later. In A. R. Pratkanis, S. J. Breckler, & A. G. Greenwald (Eds.), *Attitude structure and function* (pp.429-440). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hejazi ,Y.(1986). Reasons for not attitude of students for selecting agriculture as a field study.Sixth Scientific Seminar on Iranian Agricultural Extension and education.Published by Mashhad agricultural extension organisation, Iran. In Persian.
- Movahedi, R. (2003). Comparison between attitudes of agriscience students toward the agriculture:Case study in Lorestan and Hamedan Provinces in Iran.Unpublished research project. Islamic Azad University of Borujerd. In Persian.
- Osborne, E.W., Dyer, J.E.(2000).Attitudes of Illinois agriscience students and their parents toward the agriculture and educational programs. *Journal of Agricultural Education*, Vol. 41 Issue 3.
- Rafipour, F.(1992).Assessing attitude of villagers toward Jihade-Sazandegi. Published by Ministry of Jihade-Sazandegi .Tehran, Iran. In Persian.
- Russell F.W., (1998). Student, Learning styles, Motivation, Learning strategies and achievement in web- Based sources.Retrieved January, 6, 2006, from <http://iccel.Wfu.edu>.
- Shahvali,M. (1988).Study of Agricultural Education Students' Motivation. Unpublished research project by Jihad Daneshgahi- Agricultural College, Tehran University. In Persian.
- Sharifzadeh, M., & Zamani,G.H.(2005).Entrepreneurship and Agricultural College Students; A Case of Shiraz University. *Proceedings of the 21st Annual Conference on agricultural extension and education AIAEE*. San Antonio,USA. TX.