Iranian Students' Attitudes toward International Agricultural Issues: A Case Study of Agricultural Extension and Education Students

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ABSTRACT

The purpose of this study was to determine students' attitudes toward international agricultural issues. The population for the study consisted of agricultural extension students at Tehran and Shiraz Universities, Agriculture and Natural Resources Colleges' (N= 170). A stratified random sampling technique was employed to select samples, (n= 120). The study was conducted during the fall 2007 using a descriptive, correlational design. Cronbach's alpha, an internal consistency measure, was employed to estimate the reliability. The reliability for the instrument was found to be acceptable (Alpha= 0.89). Questionnsire was employed to assess the students'attitudes toward international agricultural issues. Results revealed that students had positive or "in agreement" attitudes toward international agricultural issues. They especially were of the belief that they should know more about agriculture and its important standing in the world economy. Moreover, students were "in agreement" concerning educational methods, which can help them learn international agricultural issues.

Keywords: Agricultural students, Attitude, International agricultural issues.

INTRODUCTION

Today's ever-changing world is becoming increasingly populated, urbanized, and interconnected (Martin, 2006). Agriculture is becoming more knowledge-intensive and rapidly changing (Anonymous, 1999). We are living in an interdependent world, and a citizen in any one country is compelled to learn about other countries and nations. To be successful in this diverse society, one is in need of international skills, knowledge, and sensitivity (Zhai and Schee, 2004). Acker (1999) in simple language stated that "global skills, global perspectives and citizenship are presently the fundamental pre-requisites for success in agri-business careers".

Undoubtedly, agricultural development in any country is dependent upon policies, plans and agricultural education systems and so, on its experts and professional graduateds. Today's role of human resources in the process of development and production is not more labor work, rather it is dependent upon skill and professional knowledge (Bahrami and Zamani 2001). These changes cause the emergence of such conditions that make agriculturalists play a principal role in management of international communications. (Martin, 2006).

Several studies conducted over the past few decades have highlighted the need for an emphasis on international agricultural issuses. Findings from these studies indicate that there is a low level of knowledge and perception about

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international concepts among high school, college and university students in major schools, colleges and universities. (Akey, 2006; Ricketts *et al.,* 2006; Friedel *et al.,* 2004; Wingenbach *et al.,* 2003; Radhakrishna and Dominguez, 1999). Radhakrishna and Dominguez (1999) implied to principal role of schools, colleges, and universities to promote international knowledge, attitudes, and concepts introduced into curriculums. Agricultural science courses should emphasize increasing in students' knowledge and skills as related to science (Ricketts *et al.,* 2006*).*

The results of studies by Wingenbach *et al.* (2003), revealed that educators just like students must improve their knowledge and awareness levels of international issue, as well as their influences on agricultural workout global. Lawver *et al.* (2005) indicated that "today's agricultural educators must be able to adjust to constant changes taking place in the agricultural industry. The ultimate goal in higher education is the achievement and application of sound education programs. This should be no exception in agricultural education programs".

There is evident need for a student to have proper knowledge related to other countries and cultures (Wingenbach *et al.,* 2003). Having knowledge concerning agricultural policies , products, peoples and cultures, as well ass world geography and history are critical to global understanding (Radhakrishna and Dominguez, 1999). Radhakrishna *et al.* (2003) concluded that "schools, colleges, and universities should emphasize accelerate efforts to infuse international concepts into the curriculums. Teachers, faculty members, and graduate students should be encouraged to build an international perspective into their curriculums by presenting lesson plans in a global context".

Akey (2006) mentioned, "There is substantial evidence that engagement in school is important in promoting a student's success and learning. Student engagement can be defined as the level of participation and intrinsic interest that a student shows. Engagement involves both behaviors (persistence, effort, and attention) and attitudes (motivation, positive learning values, enthusiasm, interest, and pride in success). Thus, the engaged students seek out activities, inside and outside the classroom, that lead to can eventually success and learning".

Agricultural students should increase theier understanding and awareness of the contemporary agricultural issues and their effects upon the social, political, economic and cultural aspects of society (Anonymous, 1999). Zhai and Schee (2004), cited that attainment of maturation in an agriculture student's global perspectives and his attitudes toward cultural diversity is a great stride for future educational program development. Wingenbach *et al*. (2003) in their study concerning students' attitudes toward international agricultural issues, found that students agreed most with the idea that international agriculture involves issues more than mere farming; global agriculture is different from one country to another; and that they should know more about agriculture and its importance in the world economy. Findings indicate that there is a dire necessity for Iranian agricultural students for succsess in being aware of other countries and other cultures.

The overall purpose of this study was to determine agricultural education and extension students' attitudes toward international agricultural issues, such as policies, products, peoples and cultures. Specific objectives of the study were to:

1. Investigate students' attitudes toward international agricultural issues;

2. Describe students' attitudes toward educational methods used for teaching international agricultural issues; and;

3. Examine the relationships between independent variables and students' attitudes toward international agricultural issues.

MATERIALS AND METHODS

Research Design and Selection of Sample

A descriptive, correlational design was employed in the study. Statistical population (N= 170) for the study consisted of the undergraduate students of agricultural extension in Tehran and Shiraz Universities, (two of the creditable universities of Iran), during the fall 2007. A stratified sampling technique was utilized to select a sample of 120 students.

Instrumentation

The research instrument was developed using modified version instruments from previous studies (Wingenbach *et al.,* 2003; Eliot and Yanki, 2002; Radhakrishna and Domingues, 1999). The survey instrument was divided into three parts. Part one (26 items) was designed to identify students' attitudes toward international agricultural issues.

Part two (30 items), was designed to assess students' attitudes concerning educational methods used for teaching international agricultural issues. The 56 statements were assessed on a Six-point, Likert-type scale, that ranged from; 1= "Strongly Disagree", 2= "Disagree", 3= "Slightly Disagree", 4= "Slightly Agree", 5= "Agree" and 6= "Strongly Agree". Students recorded their demographic data in the third part.

Validity and Reliability

The instrument was assessed for content and face validities by a panel of experts consisting of faculty members at Tarbiat Modares and Tehran Universities, Department of Agricultural Education and Extension. The instrument was pilot tested using students (N= 30) in Shiraz University,

the Faculty of Agriculture who were not part of the main study. Minor changes were made to improve the clarity and readability of the instrument. Cronbach's alpha, an internal consistency measure, was employed to estimate the reliability. The reliability for the 56 item instrument was found to be acceptable (Alpha for 30 items= 0.86, Alpha for 26 items= 0.89).

Data Collection and Analysis

Data was collected *via* mail. Of the 120 survey instruments mailed, 40 (33.3%) were returned within two weeks. A follow up mail was sent to non-respondents three weeks following the initial mail out with a further copy of the survey instrument being sent to the non-respondents. As a result of this 2nd effort, an additional 72 responds were received. In all, 112 (93.3%) survey instruments were reveived as return. Data were analyzed using frequencies, percentages, means, and standard deviation. *T*-test was employed to determine differences if any among students' attitudes toward international agricultural issues. To determine the effect size correlation, means and standard deviations for the two groups were calculated (Cohen, 1988).

RESULTS

Demographic Profile of Students

Slightly more than one half number (56.3%) of respondents were male. The distribution of respondents class standing were even among them. The majority (66.7%) of students' Grade Points Averages (GPA) were "B" (Table 1).

Objective 1: Attitudes of Students Toward International Agricultural Issues

Overall, Tehran and Shiraz University students tend to hold positive attitudes

Table 1. Frequency and percentage of gender, class standing, and GPA.

Demographics Profile	f^a	%
Gender		
Male	63	56.3
Female	49	43.7
Class Standing		
Freshman (year 1)	28	25.0
Sophomore(year 2)	28	25.0
Junior (year 3)	29	25.9
Senior (year 4)	27	24.1
GPA		
A (18-20) [b]	2	3.7
B (16-18)	36	66.7
C (14-16)	16	36.0

[a] Frequencies may not equal 100% because of missing data.
[b] Score range from 0 – 20.

toward international agricultural issues (Table 2). Students were asked to express their attitudes toward international agricultural issues with regardas to 26 statements. Means and standard deviations for the 26 attitudes exoressed are reported in Table 2. Four of the 26 statements had a mean value of over 5.00 indicating "agreement". The highest mean was declared for the statement of "I should know more about agriculture and its importance in the world economy" (Mean= 5.18; SD= 1.16). Another twelve statements had mean scores closer to 5.00 indicating agreement. Seven statements had a mean value between 4.00 and 4.50. However, for three statements, students slightly agreed with regards to their attitudes expressed toward international agricultural issues.

Objective 2: Attitude of Students' Toward Educational Methods Used to Teach International Agricultural Issues

Tehran and Shiraz University students tend to hold attitudes slightly in general agreement regarding educational methods used for teaching international agricultural

issues (Table 3). Students were asked to express their attitudes toward educational methods used to teach international agricultural issues through a set of 30 statements. Means and standard deviations for the 30 attitude statements are reported in Table 3. Twenty eight of these statements carried a mean value between 4.00 and 5.00 indicating "slight agreement." The highest mean was obtained for the statement of "a variety of audio-visual materials (web sites, slides, videos, films, etc.) helps me know more about global agriculture" (Mean= 4.99; SD= 1.01). Another two statements bore mean scores less than 4.00 indicating slight disagreement regarding the attitudes toward educational methods used to teach international agricultural issues.

Objective 3: Relationships betwee Independent Variables and Students' Attitudes toward

International Agricultural Issues
T-tests results indicated significant differences between male and female students in terms of their attitudes toward international agricultural issues, in which females held a more positive attitude (Table 4).

The *F* test (ANOVA) was employed to determine differences of attitude among the four educational levels and among different GPAs. ANOVA results indicated significant differences of attitude between senior and freshman students. Fisher's LSD indicated that senior students scored significantly higher in their attitttudes than freshmen. Nevertheless, no significant difference of attitude toward international agricultural issues among different GPA scores was revealed (Table 5). Still, agriculture students with higher grades are apt to possess more knowledge and prevalent attitudes toward international agricultural issues.

Table 2. Attitude toward international agricultural issues.

Attitude	n	Mean	SD	Rank
I should know more about agriculture and its importance in the world economy.	112	5.18	1.16	1
I should know more about agricultural products from other countries, which are consumed in my city of dwelling.	112	5.05	1.05	2
I should know more about agricultural products which my country exports to other countries.	112	5.02	1.24	3
Natural disasters affect the price of food in my city/ country.	112	5.00	1.20	4
Policies have major effects on world agriculture.	112	4.95	0.98	5
I should know more about how world disasters affect local agriculture in my community.	112	4.92	1.02	6
I should know more about differences between developed and developing countries.	112	4.88	1.22	7
Understanding global politics helps Iran producers better market their products abroad.	111	4.87	1.20	8
Understanding other cultures helps Iran producers more efficiently market their products abroad.	111	4.81	1.10	9
Global agriculture is different from one country to another.	111	4.79	1.01	10
Learning more about agriculture in other countries helps one to understand future changes in world agricultural production.	110	4.74	1.51	11
Iran agricultural products are of a more superior quality to products from other countries.	112	4.73	1.28	12
I should know more about the cultures of other countries.	112	4.70	1.39	13
Marketing Iran agricultural products to other countries helps the economy.	110	4.63	1.43	14
I should know more about my city agricultural industry and its connection to world trade.	108	4.60	1.22	15
I should know more about other countries' markets for Iran agricultural products.	109	4.58	1.20	16
I should know more about how world agriculture affects food prices in the local stores.	110	4.45	1.29	17
In times of famine, Iran should help other countries with philanthropic aid.	112	4.41	1.19	18
World events impact the agricultural industry in my community.	112	4.41	1.26	19
Global food productions allow me to eat a variety of products all the year.	112	4.35	1.23	20
Global food production affects food prices in my local stores.	111	4.26	1.41	21
International agriculture involves more than more farming.	112	4.03	1.30	22
Iran should actively help other countries to develop their agricultural industries.	112	4.00	1.33	23
Marketing agricultural products to other countries will help my economy.	110	3.98	1.46	24
Our culture highly affects agriculture in other countries.	110	3.90	1.47	25
Competition among producers worldwide keeps food prices low in my city or country.	112	3.78	1.48	26
Summation Mean [a]	112	118	15.05	

[a] Mean computed on a scale of 1= Strongly Disagree to 6= Strongly Agree and could range from a low of 26 to high of 156 with the theoretical mid point of 91.

Table 3. Attitude toward educational methods used to teach international agricultural issues.

Attitude	n	Mean [a]	SD	Rank
A variety of audio-visual materials (web sites, slides, videos, films, etc.) helps me know more about global agriculture.	112	4.99	1.01	1
If properly instructed, I can better understand international agricultural career opportunities.	11	4.89	1.37	2
Considering Iran agricultural exports, I should be instructed and informed on other countries' agricultural production practices.	112	4.84	1.20	3
If properly instructed I, I can understand basic international agricultural concepts.	111	4.82	1.33	4
Considering Iran agricultural exports, I should be instructed on other countries' cultures.	112	4.76	1.23	5
I am more likely to understand global agriculture if instructed about countries that are in need of Iran agricultural products.	112	4.74	1.22	6
Lessons on international agricultural issues should equip and prepare me for future changes in global agriculture.	112	4.70	1.05	7
My college courses should include global agricultural topics for dissection.	112	4.69	1.36	8
Lessons on international agricultural issues should help me appreciate the interdependency of nations around the world.	111	4.66	1.24	9
I am more likely to understand global agriculture if instructed about major export markets for Iran agricultural products.	111	4.65	1.28	10
Lessons on international agricultural issues should provide me opportunities to interact with people in other parts of the world.	110	4.64	1.08	11
Lessons on international agricultural issues should help me understand global agricultural marketing systems.	112	4.57	1.16	12
I am more likely to understand global agriculture if instructed about major agricultural products produced in my country.	112	4.57	1.30	13
Considering Iran agricultural exports, I should be instructed on other countries' infrastructure.	110	4.53	1.26	14
I learn about international agricultural issues by taking vacations in other countries.	108	4.52	1.60	15
I am more likely to understand global agriculture if instructed about the political issues between Iran and other countries.	112	4.51	1.35	16
Lessons on international agricultural issues should help me function better as a citizen in a global society.	110	4.50	1.07	17
I am more likely to understand global agriculture if instructed about major agricultural products produced in my city.	111	4.48	1.27	18
I am more likely to understand global agriculture if instructed about the economic issues between Iran and other countries.	112	4.47	1.30	19
I learn about international agricultural issues from attending events such as fairs or exhibitions.	112	4.42	1.10	20
Considering Iran agricultural exports, I should be instructed on other courtiers' natural recourses	111	4.33	1.41	21
I learn about international agricultural issues from participating in "study abroad" programs.	112	4.32	1.38	22
I am more likely to understand global agriculture if instructed about the humanitarian issues between Iran and other countries.	112	4.29	1.30	23
Considering Iran agricultural exports, I should be instructed on other countries' standards of living.	112	4.24	1.27	24
Guest speakers who are knowledgeable about international events help me learn about global agriculture.	110	4.21	1.24	25
Lessons on international agricultural issues should not be too complex for me.	112	4.20	1.23	26
I learn about international agricultural issues from interacting with international students.	112	4.19	1.55	27
I learn about international agricultural issues from watching selected television programs.	111	4.14	1.48	28
I learn about international agricultural issues from international agricultural exchange students at my college.	111	3.99	1.41	29
I learn about international agricultural issues from listening to selected radio programs.	110	3.59	1.47	30

[a] Mean computed on a scale of 1= Strongly Disagree to 6= Strongly Agree.

Table 4. *T*-Test results for attitude toward international agricultural issues examined by gender.

Variable	n	Mean [a]	SD	T	P	Cohen d.
					0.008	0.17
Gender						
Female	49	99.21	21.3			
Male	63	135.5	20.8	2.69		

[a] Mean computed on a scale of 1= Strongly Disagree to 6= Strongly Agree and could range from a low of 26 to high of 156 with theoretical mid point of 91.

Table 5. *F*-test Results for attitude toward international agricultural issues and selected demographic characteristics.

Variable	n	Mean	S.D.	F	P
Class Standing					
Freshman	28	4.31	0.66		
Sophomore	28	4.57	0.50	2.63	0.05
Junior	29	4.70	0.55		
Senior	27	4.76	0.57		
GPA					
A (18-20)	2	4.66	0.31		
B (16-18)	36	4.78	0.52	1.02	0.36
C (14-16)	16	4.57	0.42		

DISCUSSION

Over one-half of the students were males. Class standing was evenly distributed among students. There was a significant difference observed between a male and a female student's attitude as indicated by *T*-test. Female students were more in agreement, this being consistent with results obtained by Hedjazi and Omidi (2008). A majority of students' grade point averages (GPA) amounted to "*B*". The results of this study revealed that students had positive attitudesor "were in agreement" toward international agricultural issues. They especially believed that they should know more about agriculture and its importance in the world economy.

Morover, students were agreement regarding educational methods, which help them learn international agricultural issues. From the students' point of view, a variety of audio-visual materials can particularly help them learn more about global agriculture; and, if properly instructed, they can better explore international agriculture career opportunities. These present results just similar to what have been concluded in some previous studies (Wingenbach *et al.*, 2003; Elliot and Yanik, 2002). Educators can by applying varied instructional materials help students obtain comprehensive perspectives regarding global agricultural issues.

A significant positive relationship was also idtentified between the attitude and education level, in which the students with higher education level were more in favour of global agricultural issues than the lower education level ones. This supports the previous study of Harbstreit and Welton (1992).

Therefore, it is necessary to promote students' perceptions toward international agricultural issues. This demands one's effort to connect global events with media and curriculums. As explained by Wingenbach *et al.* (2003), a strong connection between the daily global events reported in mass media and classroom discussions can increase students' attitudes towards international agricultural events. In support of the suggestions by Teichler and Carlson (1990), international experience can provide cultural awareness, improve

communication abilities, and increase foreign language skills. The study shows that it is essential to provide international experiences such as attending events, study abroad, taking vacation in other countries for developing students' discernment and awareness.

Despite the important role of such mass media as TV and radio in human's life and their potential on the timely spread of events, findings show they play a poor role in promotion of students' attitudes. This problem can cause deficiency in students' perception regarding world events.

The results of this research could help Iranian universities and educational institutions to better understand their students' attitudes toward use of international agricultural issues and methods of delivery of these issues. We may certainly need to conduct further research on the students of other deciplines as well, to evaluate and promote the existing methods of internationalization of the students.

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نگرش دانشجویان ایرانی پیرامون موضوعات کشاورزی بین الملل: مطالعه موردی دانشجویان ترویج و آموزش کشاورزی

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چکیده

هدف این مطالعه تعیین نگرش دانشجویان درمورد موضوعات کشاورزی بین الملل می باشد.جامعه آماری تحقیق متشکل از دانشجویان رشته ترویج و آموزش کشاورزی دانشکده های کشاورزی و منابع طبیعی دانشگاههای تهران و شیراز می باشد (تعداد =۱۷۰). این تحقیق در طول سال ۲۰۰۷ به انجام رسید و از روش توصیفی- همبستگی بهره گرفت. کرونباخ الفا که روش اندازه گیری پایایی درونی است جهت تخمین روایی استفاده گردید.روایی ابزار مورد استفاده در حد قابل قبولی بود(ضریب آلفا = ۰/۸۹). نگرش دانشجویان نسبت به موضوعات کشاورزی بین المللی با استفاده از پرسشنامه تعیین گردید. نتایج نشان داد که اغلب دانشجویان نگرشی مثبت یا "موافق" در مورد موضوعات کشاورزی بین الملل داشتند. بویژه آنها معتقد بودند که باید در مورد کشاورزی و اهمیت آن در اقتصاد جهانی بیشتر بدانند. به علاوه دانشجویان در مورد شیوه های آموزشی که به آنها کمک می کند تا موضوعات کشاورزی بین الملل را یادبگیرند نظر مساعدی داشتند.