

## **STUDYING THE ATTITUDES OF AGRICULTURAL FACULTY MEMBERS TOWARDS DISTANCE EDUCATION**

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### **ABSTRACT**

This descriptive survey research was undertaken to study the attitudes of agricultural faculty members towards distance education. The statistical population of the study consisted of all the faculty members of agricultural colleges of Shiraz and Ferdowsi Mashhad universities (N=180). According to Krejcie & Morgan table, a sample of 123 persons was selected using the stratified random sampling method (colleges as strata). Data collected using a mailed questionnaire that was validated by a panel of experts and the reliability index was established by Cronbach alpha's coefficient. The results revealed that more than half of the agricultural faculty members had moderate familiarity with distance education. Also, the results indicated that agricultural faculty members had a positive attitude towards distance education. Finally, agricultural faculty members ranked time as the primary barrier to using instructional technology in distance education.

**Keywords:** Agricultural Faculty Members; attitudes; distance education.

### **INTRODUCTION**

Information and communication technologies (ICTs) are a major factor in shaping the new global economy and producing rapid changes in society. Within the past decade, the new ICT tools have fundamentally changed the way people communicate and do business. They have produced significant transformations in industry, agriculture, medicine, business, engineering, and other fields (UNESCO, 2002). Also, Information technology is dramatically affecting the way people teach and learn (Delacey and Leonard, 2002; Radcliffe, 2002; Starr, 1997). They have the potential to transform the nature of education-where and how learning takes place and the roles of students and teachers in the learning process (UNESCO, 2002). The world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills they need in the 21st century. Social reality is changing very quickly, university studies must adapt to the international context and technology development is facilitating new strategies of communication.

All this is forcing Universities to change not only their degrees and studies programs, but also to renew some situations that until now seemed stable as teaching methodologies. Information and communication technologies (ICT) are becoming more and more important in the higher education process, claiming new spaces and conditions of learning, and new professional roles for teachers (Garcia and Tejedor, 2006).

Distance education is any type of education in which learners and instructors are separated by physical distance (Whalstrom, 2003) or time. It has a substantial history that begins in the mid 1800's with correspondence type of print-based courses (Verdiun & Clark, 1991). Besides the print-based materials, distance education benefited from telecommunication technologies of radio and television broadcasting and audio-video recording during the past years.

According to the literature (e.g., Cragg et al., 2003; Brinkerhoff & Koroghlanian, 2005; Williams et al., 1999) distance learning through online or Internet technology has 68 enormous potential to reach widely dispersed populations and to meet educational needs of individuals. Distance education fosters learning and teaching in a variety of ways.

One of the many advantages of distance education is that it offers instructors and student flexible learning setting in terms of time and location. "Distance education is becoming a good way to acquire knowledge separate from the traditional method of attending the classroom" (Schmidt & Gallegos, 2001). Learning does not require students to being physically present in the same place as an instructor (Walker, 2005) nor at the same time. Distance education might be used for different purposes such as supported learning, blended learning (combination of face-to-face and online learning), and entirely online teaching (Pearson & Trinidad, 2005). In distance education, learning is developed through sharing ideas and thoughts (Palloff & Pratt, 1999) and personal interactions between participants (Walker & Fraser, 2005). Many factors, such as the infrastructure, quality of support system quality of content and assessment, and peer support networks, may influence the online learning experience (Arbaugh, 2000; Areti, 2006; Bender, Wood, & Vredevoogd, 2004; Roberts et al., 2005; Trinidad & Pearson, 2004). Schmidt and Gallegos (2001) list other factors such as type of distance delivery method, reasons for enrolling in the course, and learning objectives. In fact, planning and designing distance education courses is a complex task that includes many factors (Pearson & Trinidad, 2005; Trinidad, Aldridge, & Fraser, 2005; Wilson, 2001).

Thus, educators need to consider these factors to provide their students with effective learning environments. Teachers played an important role in the success of distance education (Gibson, Tesone, Hodgetts, & Blackwell, 2001; Lin, Young, Chan, & Chen, 2005; Wiesner, 2000), especially those in higher education (Croy, 1998; Haas & Senjo, 2004). Addressing the question raised by Shoemaker (1998) on the leadership of distance education in higher education, Irlbeck and Pucel (2000) identified five common elements requiring leadership, including quality of education, planning, implementation, resources, and support. Teachers and government policies have significant influences on all these five elements. Berge, uilenburg, and Haneghan (2002) also suggested that teacher issues were the highest ranking barriers to a successful distance education program.

Teachers have been reported to have problems with distance education because of the extra work on classroom material conversion (Lee, 2002), difficult to gauge student learning (Motiwalla & Tello, 2000), and the lack of teacher–student interaction (Arbaugh, 2005; Ausserhofer, 1999; Gibson et al., 2001; Wiesner, 2000).

However, as can be seen in the abundant literature on the effect of distance education, the majority of data were drawn from the learners' perspective instead of the teachers' (Carr, 2000; Everetts, 1998; Gibson et al., 2001; Hailey, Keith, & Hult, 2001). Although some teachers' viewpoints could be found in these literatures, since the authors were also teachers, we found very little full-scale empirical research done to collect the teacher's side of the story. Existing literatures on this respect were limited to small-scale qualitative studies (see Broady-Ortmann, 2002; Haas & Senjo, 2004; Lao & Gonzales, 2005) or studies toward a certain artifact (such as Woods, Baker, & Hopper, 2004). Croy (1998) once pointed out that "it is faculty who bear primary responsibility for the impact of distance technology in higher education, and there is currently a wide gulf between faculty attitude and this technology". Blignaut and Trollip (2003) were aware of this lack of teacher studies and had developed taxonomy of faculty participation in synchronous learning environments.

Howell, Saba, Lindsay, and Williams (2004) presented seven strategies for university administrators and faculty for deploying their own strategic plan to ensure program success. These strategies included:

- enabling colleges and departments to accept more responsibility for distance education activities;
- providing faculty more information about the distance education programs and activities; (3) encouraging faculty to incorporate technology into their traditional classrooms;
- providing strong incentives for faculty to participate in distance education;
- improving training and instructional support for distance education faculty;
- building a stronger distance education faculty community; and
- encouraging more distance education scholarship and research.

Unfortunately, these seven strategies were merely general descriptions, and did not offer specific links to applicable groups of teachers with different motivations, attitudes or experiences. There was still a void in the understanding and description of teachers in terms of their overall attitude towards distance education.

We believe this kind of information is important for university managers in their strategic decision to effectively invest in distance education (Shea, Motiwalla, & Lewis, 2001), to minimize teacher resistance, and to encourage innovation (Irlbeck & Pucel, 2000).

Therefore, the intent of this research was to clarify faculty members' attitudes towards distance education and determine the most important barriers to using instructional technology in distance education. Iranian agricultural faculties' distance education is briefly introduced below before presenting the research methodology for this study. Distance education in Iran is still in its infancy stages and there are only a few online programs although it is a necessity for Iran rather than convenience owing to shortage of higher education institutions and enormous demand for education.

**Agricultural Faculties have not delivered any online program and faculty members have not passed any online courses, but they do many activities via internet, for example they communicate with students and receive their assignments and homework via internet. In other words, distance education as a type of education has not been used in agricultural higher education, but faculty members use internet and distance education tools very much for doing their daily tasks.**

## **RESEARCH METHODOLOGY**

**A descriptive survey research was conducted to achieve the objectives of the study. The population of this study consisted of all the faculty members of agricultural colleges of Shiraz and Ferdowsi Mashhad universities (N=180). According to Krejcie & Morgan table, a sample of 123 persons was selected using the stratified random sampling method (colleges as strata). Data were collected using a mailed questionnaire covering:**

- **Demographic characteristics such as sex, age, work experiences and employment status; (2) one question regarding the level of familiarity of agricultural faculty members with distance education;**
- **Eight questions about attitudes of agricultural faculty members towards distance education and**
- **Four questions about barriers to using instructional technology in distance education.**
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**The parts of 2 and 4 were measured using a five-point Likert scale ranging from 1 (very low) to 5 (very high). Also, to measure the attitudes of agricultural faculty members towards distance education, a five point Likert-type rating scale was used (1=strongly disagree to 5=strongly agree).**

**The validity of instrument was established by a twelve-member panel of experts in the field of agricultural extension and education at the University of Tehran and distance education related fields from the other universities. A pilot study was conducted to determine the reliability of the instrument.**

**Cronbach alpha's coefficient for scale of perceptions of agricultural researchers towards distance education was 0.91, which refers to the reliability of the research questionnaire. The collected data were analyzed using the statistical package for the social sciences (SPSS). Appropriate statistical procedures for description, including frequency, percentage, and cumulative percent were used.**

## **RESULTS**

**According to the results, most of the respondents (96.5%) were male and only 3.5% were female. The average of respondents' age was 42.5 years old. For faculty members, the period of work experience ranged from 2 to 30 years (13.2 years, on average). As to agricultural faculty members' employment status, more than half of them (74.5%) were official government employees, and the rest (35.5%) were performing their jobs based on some other arrangements, like temporary employment.**

**Table 1:  
Level of familiarity of agricultural faculty members with distance education**

<b>Level of familiarity with distance education</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
<b>Very low</b>	<b>6</b>	<b>4.9</b>	<b>4.9</b>
<b>Low</b>	<b>14</b>	<b>11.1</b>	<b>16</b>
<b>Moderate</b>	<b>70</b>	<b>57</b>	<b>73</b>
<b>High</b>	<b>27</b>	<b>22.1</b>	<b>95.1</b>
<b>Very high</b>	<b>6</b>	<b>4.9</b>	<b>100</b>
<b>Total</b>	<b>123</b>	<b>100</b>	

As shown in Table: 1 a small percentage of the respondents (16%) had very low and low familiarity with distance education. Also, the most of respondents (57%) indicated their familiarity with distance education at moderate level. While, only some 26% of agricultural faculty members were familiar with distance education at high (22.1%) and very high (4.9%) levels.

Table: 2 portray the attitudes of the agricultural faculty members towards distance education. According to the results, 88.8% of the respondents agreed with following statement: "Distance education produces better learning results than traditional teaching". Considering the statement: "Distance education rapidly delivers knowledge and information to learners", 85.7% of the respondents indicated their agreement with that and only some 10% of them disagreed with this statement.

The majority of the respondents (79.1%) believed that "Distance education effectively integrates teaching resources", while, 10.6% of them disagreed with this idea. Also, 75.2% of the respondents agreed with statement: "Distance education increases the flexibility of universities in making teaching strategies" and 13.3% of them disagreed. Regarding the statement: "The rise of distance education gradually replaces traditional teaching", 50% and 28% of the respondents were agreed and disagreed, respectively. Relatively a small percentage of the respondents (19.4%) believed that "Distance education decrease mutual understanding between teachers and learners".

Thirteen percent (13%) of respondents agreed with the statement: "Distance education doesn't consider learners' individual preferences" and 78.4% of them disagreed with mentioned statement, too.

Finally, only 8.3% of respondents indicated that "Distance education decreases the teacher's teaching performance", meanwhile, most of them (77.7%) were disagree with this idea. The results indicated that agricultural faculty members ranked time as the primary barrier to using instructional technology. This included time to prepare course materials ( $m= 3.88, SD= 1.15$ ) and time to participate in technical training ( $m= 3.67, SD =1.25$ ). Respondents also rated lack of support and lack of hardware and software as barriers to their use of instructional technology.

At least one third of all respondents expressed dissatisfaction with technology for teaching, technical computer support, and instructional design support at their institutions.

**Table: 2**  
**Attitudes of agricultural faculty members towards distance education**

Statements	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Distance education produces better learning results than traditional teaching	16	13.3	93	75.5	4	3.3	7	5.4	3	2.5
Distance education rapidly delivers knowledge and information to learners	15	12.6	91	73.1	5	4.3	8	6.8	4	3.2
Distance education effectively integrates teaching resources	15	12.6	82	66.5	10	8.3	12	9.7	4	2.9
Distance education increases the flexibility of universities in making teaching strategies	18	14.7	75	60.5	14	11.5	9	7.2	7	6.1
The rise of distance education gradually replaces traditional teaching	50	39.9	12	10.1	27	22	3	2.5	31	25.5
Distance education decrease mutual understanding between teachers and learners	3	2.5	20	16.9	14	11.5	75	60.5	11	8.6
Distance education doesn't consider individual preferences among learners	0	0	16	13	11	8.6	81	65.8	15	12.6
Distance education decreases the teacher's teaching performance	0	0	10	8.3	17	14	87	70.2	9	7.5

## CONCLUSION

The study started by presenting data on respondents' familiarity with distance education. Most of the agricultural faculty members were familiar with distance education at moderate level. More than 80 percent of survey respondents indicated that they had moderate and high familiarity with distance education. In regarding the attitudes of agricultural faculty members, most of them believed to the distance education produce better learning results than traditional teaching. Also, most of the agricultural faculty members considered "distance education as a system to rapidly deliver knowledge and information to learners". At the same time, most of the agricultural faculty members believed that "distance education effectively integrates teaching resources and increases the flexibility of universities in making teaching strategies". In general, the results of this study regarding the attitudes of agricultural faculty members towards distance education indicated that respondents showed a positive attitude towards distance education.

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