



## ATTITUDES OF STUDENTS OF THE FACULTY OF AGRICULTURE TOWARDS USING THE INTERNET IN AGRICULTURAL WORK - A COMPARATIVE STUDY BETWEEN EGYPT AND IRAQ

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### Abstract

The research aims to build a scale to identify the attitudes of students of the Faculty of Agriculture in both Egypt and Iraq towards the use of the Internet in agricultural work, as the research aims to identify some of the distinctive characteristics of the students, and knowledge of the correlative and regressive relationships between the characteristics of the respondents and their attitudes towards the use of the Internet in agricultural work. As well as their view on the obstacles that hinder the use of the Internet in agricultural work and their proposals to overcome them. The students of the second, third and fourth academic levels were chosen by the Faculty of Agriculture at Kafr El-Sheikh University in the Arab Republic of Egypt and the Faculty of Agriculture at the University of Kirkuk in Iraq, who numbered (1261) and (522) male and female students respectively, a random sample was chosen from the Faculty of Agriculture, Kafr University Sheikh by (10%) to be the research sample (126) male and female students, and a random sample (23%) was chosen from the students of the Faculty of Agriculture, University of Kirkuk to be the research sample (120) male and female students. The questionnaire was prepared in three parts. The first part included questions about the personal, social, economic and communication characteristics of students, while the second part represented by the scale prepared by the researchers to measure students' attitudes towards using the Internet in agricultural work. It included (23) paragraphs, and the third part dealt with obstacles Using the Internet in agricultural work and students' proposals to overcome it. After preparing the questionnaire, the survey sample data was collected from outside the two research samples, and after confirming the validity of the questionnaire form to collect the research data, the data was collected during March and April of the year 2019 and was discharged, tabulated, and analyzed using a set of statistical means using the spss statistical analysis program. The results showed that the scale of the attitude is characterized by high stability and high logical sincerity, and that the scale statements have achieved internal consistency for its three components (cognitive, emotional, and enzymatic) and that all phrases that consist of the scale have a high degree of realism. The results also show that the majority of the respondents in the Egyptian and Iraqi research samples have positive tendencies towards using the internet in agricultural work, and the results also indicated a significant difference between the degrees of the attitude of the two research samples towards the use of the Internet in agricultural work, where the Iraqi sample outperformed the degree of its attitude over the Egyptian sample, so it was Two-thirds of them have a positive attitude, also the results indicated that more than half of the respondents in both samples of research are females and that the majority of them are urbanized, and it was found that the respondents are exposed to agricultural sources of information significantly, and that they have good agricultural experience and use the Internet To obtain agricultural ideas, they are aware of the benefits of using the Internet in agricultural work, and that they are positive towards agricultural work. The results of the study also indicated that there is a significant correlation between the use of the Internet in agricultural work and the variable exposure to agricultural information sources, communication methods, the level of ambition, and the attitude towards agricultural work, as it turned out that the independent variables that were studied have explained (23%) of the variation in attitudes Students towards the use of the Internet in agricultural work, and that one of the most important obstacles that students have mentioned is the poor quality of the Internet and the high costs of participation in it.

**Keywords:** Attitudes of students, Internet in agricultural work, comparative

### Introduction

Developing societies, especially rural ones, are witnessing rapid and continuous changes in various aspects of life. The Egyptian and Iraqi society, as one of the developing human societies, seeks to achieve comprehensive development in all productive or service sectors by directing efforts and capabilities to develop and modernize the human element to keep pace with technological developments, because development it is the goal of the human being, and it is its means to advance society. This is achieved through the creation of desirable behavioral changes in the information, skills and attitudes of individuals that make them with a productive mental strength to raise their standard of living. The focus is in this field on Young people, as effective players for the renaissance of society and its future development, have a duty as youth play an effective role in achieving development goals, with their great capabilities and energies that enable them to bring about cultural, social and economic changes in their society.

Technology is the path of development used by advanced societies to rush forward, technology plays an important role in the global system, it supports its unity and cohesion on the one hand, and raises a great deal of changes in developing societies such as Egyptian and Iraqi society that were able to obtain or develop it on the other hand, Naturally, having an impact on the youth of these societies is a more sensitive understanding of achieving rapid change (Layla, 2004).

Education is one of the most important ways to achieve societal development in the Egyptian and Iraqi society, as it represents the basic pillar of their development. The human being is the source of change and depends on converting natural resources into beneficial things that can be better utilized and directed, and through education, he can develop his capabilities and provide him with the knowledge, skills and attitudes that enable him to create and innovate (Al-Shunaqi, Layla, and Mohsen, 1992).

In order to achieve agricultural development, technological methods and methods must be used in the various stages of production, and the different combinations of crops and farm projects through which farmers seek to achieve the best use of their resources (Abdel-Maksoud, 1993).

During the last two decades of the twentieth century, the world was characterized by many economic, cultural, political and technological changes, especially in the field of information and communications technology related to the use of computer and internet technology that allowed a great deal of information and knowledge exchange. The importance of using information and communication technology in developing human resources, especially the rural ones, and providing them with the many knowledge and skills they need to improve their life conditions.

Accordingly, taking advantage of the rapid developments in the field of information and communication technology based on the application of computer technology and the Internet can contribute at the present and near future in improving and developing the tasks of agricultural extension work to develop its ability to publish information and the results of modern agricultural scientific research to all rural areas (Abdel Wahed, 2015).

University agricultural education is one of the officials responsible for preparing agricultural cadres that bear the responsibility of developing the agricultural sector and the rural community by bringing about desirable changes in student behavior by providing them with new knowledge and mental and manual skills, as well as positive attitudes towards the means of progress and the use of modern agricultural techniques to develop the agricultural production process.

The faculties of agriculture in university education are considered one of the important sources to provide learners with modern methods to achieve quality in the agricultural educational process, as they abound with a lot of modern, advanced knowledge in an effort to reach students to individuals who are up to date with the process of development and who are effective in the production process to achieve the desired standard of living for members of society.

Although the faculties of agriculture are educational institutions in the first place, but also one of their basic tasks is to contribute to conducting research and studies in the various fields of agriculture, and to provide extension services and technical consultations to the competent authorities, especially that our developing societies are in urgent need to coalesce universities with society and introduce a lot of change on agricultural methods and the development of rural lifestyles in them to keep pace with the development in the required production rates (Al-Tunoubi, 1995).

Agricultural students in the Egyptian and Iraqi agricultural educational institutions are considered one of the most important sectors of youth in which agricultural extension is concerned, because they will bear the greatest burden for the future agricultural development process by virtue of their field of study, and they can also play an active role in achieving the desired agricultural development goals

by strengthening Their attitudes towards using information and communication technology methods in agricultural work.

The attitude towards the use of information and communications technology in agricultural work, including the use of the Internet, has become a national goal that all state agencies seek to achieve, especially among students graduating from colleges of agriculture in both countries, because of its great importance in helping them to apply what they have studied in practical life, and interacting with the environment And improve their expectations and outlook for the future, and achieve their desires to benefit from them in order to face the continuous progress and development in the world, it cannot be overlooked that young graduates as a huge human energy can be better invested in this field to achieve the desired agricultural development and hence is the decisive factor M and effective investment in physical and natural community resources available.

In order for the information and communication technology to achieve the expected results from it in bringing about human resource development in the agricultural sector - rural agricultural youth - it is necessary to provide positive attitudes for these rural youth towards the possibility of using this modern technology in agricultural work, in order to obtain agricultural information and knowledge through it, and to acquire Some of the skills that are useful in setting up their projects in the field of agricultural production and achieving a leap in production and then improving their standard of living.

Based on that, the problem of this research stems from the fact that the use of the Internet by agricultural students in the field of agricultural work has become an inevitable necessity for the advancement of agricultural production, and despite the widespread use of the Internet and its potential among students of the Faculty of Agriculture at the Egyptian University of Kafr El-Sheikh and students The Faculty of Agriculture at the University of Kirkuk, Iraq, but there is still a weakness in their demand to use the applications of this technology in agricultural work in order to achieve the goals of the agricultural development process in both countries.

Accordingly, the problem of this research can be crystallized in a number of questions: Is it possible to build and codify a scale to measure the attitudes of students in both countries towards the use of the Internet in agricultural work? What are the types of attitudes of the students respondents towards the use of the Internet in agricultural work? Are there differences between the average scores of the attitudes of the students respondents in both countries towards the use of the Internet in agricultural work? What are the factors that affect the degree of attitudes of these students in both countries towards the use of the Internet in agricultural work? Finally, what are the obstacles that hinder the use of the Internet in agricultural work from the viewpoint of the students respondents in both countries, and what are their proposals to overcome them?

### **Research Objectives**

This research aims mainly to identify the attitudes of students of the Agriculture Faculty towards the use of the Internet in agricultural work (a comparative study between Egypt and Iraq), and this can be achieved through the following sub-goals:

- 1- Building and codifying the scale of attitudes of the students respondents in Egypt and Iraq towards using the Internet in agricultural work.
- 2- Identify some characteristics of students of the Agriculture Faculty in the two research samples.
- 3- Determining the attitudes of the students respondents towards the use of the Internet in agricultural work in Egypt and Iraq.
- 4- Study of the correlations among the attitudes of the respondents towards the agricultural work as a dependent variable and the following independent variables: number of family members, education of the head of the family, agricultural information sources, exposure to agricultural information sources, possession of means of communication, level of ambition, agricultural experience, dealing with computers, and dealing With the Internet, the use of the Internet to get agricultural ideas, knowledge of the benefits of using the Internet, and the attitude towards agricultural work.
- 5- Study of the regression relations among the respondents' attitudes towards agricultural work as a dependent variable and the group of studied independent variables.
- 6- Determining the obstacles to using the Internet in agricultural work from the viewpoint of the students respondents in Egypt and Iraq and their proposals to overcome them.

### References review

This section presents some theoretical frameworks related to the subject of research that have been made available.

The definitions that dealt with the concept of attitudes have varied, as there are those who define them as effective forces in determining the response of the individual and directing his behavior, and these attitudes may be positive or negative in varying degrees of intensity or strength (Al-Adly, 1973).

Muhammad (1981) defines it as a relatively continuous arrangement of beliefs that relate to a situation or topic so that one makes a natural willingness to this position or subject in a preferred way. Abu El-Nile (1985) defines it as a psychological predisposition whose outcome appears in a point of view on a topic, a value from values, or a group of groups.

A attitude is considered to be a whole or a general format that has components and dimensions of cognitive, emotional, and behavioral, and since the concept of attitude represents an organization of these components, there must be a strong correlation or a significant relationship between them that reflects the extent of individuals thinking, feeling, and their behavior towards any subject (Berkowitz, 1986). Al-Ashwal (1987) shows the attitude as a relatively stable evaluation system, which is represented by emotional reactions that reflect the evaluation concepts and beliefs of the individual he learned about the characteristics of a subject or a category of social issues.

Abd Al-Raheem (1988) mentioned the following definitions of attitudes: Anastasi definition that a attitude is

often defined as a tendency to respond positively or negatively to a particular set of stimuli, and Thurston's definition that a psychological attitude is a generalization of individual responses a generalization that drives By conducting it far or close to a certain perception ,Boring & Langfield define the attitudes is that the emotional, cognitive and cognitive state of mind about some aspects of the field in which the individual lives, and the definition of Guilford, J where he sees that the attitude is a special and general willingness in individuals but is acquired in varying degrees And pushes them to Responding to things and situations in ways that can be said to be in their favor or against it, and Gordon Allport, G who defines a attitude as a state of neurological mental readiness through experience and dynamically influencing individual responses to all subjects and attitudes associated with it.

Awad (1991) defines a attitude as an acquired emotional willingness, that is, it is not innate and relatively constant, determining the behavior of the individual and his feelings that he prefers regarding things, people, groups, or topics that the individual prefers or rejects, or toward the individual's idea of himself. As for Abu Tahoun (1998), the attitude is defined as a state of actual preparation for the individual towards value. Zahran (2000) believes that the attitude is to form a hypothetical or latent or medium variant between stimulus and response.

Al Rayes (2001) defines it as a state of mental readiness acquired as a result of the experiences of the individual in his environment or what he acquires in education so that in the end it affects his behavior towards things, people, affirmative attitudes or attitudes or symbols in the environment that provokes this response. Jabali (2003), defines it as a psychological preparation or an educated nervous predisposition for a positive or negative response to people, things, subjects, attitudes, or symbols in the environment that provokes this response.

According to the previous definitions of the attitude, it can be crystallized in that it is a mental neurological predisposition towards different individuals, situations, things, or ideas that form over a period of time, and it may be positive, neutral, or negative according to the person's vision of these matters, which is a general pattern that has components and dimensions of cognitive, emotional, and behavioral, as well as This attitude can be changed or modified to achieve the goals of agricultural extension in order to make desired changes in the behavior of the individual.

Abu Al-Nile (1985) agrees with Al-Shabrawi (1987) that the components of the attitude are: 1- The cognitive component: refers to the knowledge of the person and his belief in the validity or error of a subject, 2- The emotional component: is represented by feelings The person and his desires towards the subject and the extent of his appetite or alienation from him and his love or hatred for him, that is, it includes the emotional aspects related to the thing, 3- The behavioral component: It includes the practical response towards the subject of the attitude, that is, it indicates the behavioral preparations related to the subject of attitude.

Yunus (1978) indicates that there are factors that influence the formation of attitude. These factors are summarized as follows: 1- The cultural framework: where a person lives in a framework of dynamically interacting

customs, traditions, attitudes and beliefs that affect the individual through His social relationships and his environment, whether it is his family or his school, 2- The method of education and the actual behavior of parents, 3- The family, 4- The social interaction, 5- The psychological structure of the individual, 6- The information and knowledge balance.

Salem (1982) stated that there are many factors that help in shaping the attitude, which can be addressed under three groups as follows: (a) Factors specific to experience, which include: 1- Sharpness of expertise, 2- Repeated expertise, 3- Integration of experience, 4- Differentiation of experience, 5- Transfer of experience. (B) Individual factors: They are: 1 - the personality of the individual, 2 - age, 3 - the satisfaction of the individual's desires. (C) Community-specific factors, which include: 1- civilizational factors, 2- the influence of parents, 3- the influence and membership of the group in shaping attitudes, 4- social standing.

Al-Ahmadi (2006) states that there are many sources that contribute to the individual acquiring certain attitudes, and these sources include: 1- Shocking emotional experiences, 2- Repeating certain responses.

Attitudes are characterized by acquired, not innate, and relative stability preparations, as well as mental and emotional preparations by repeated experience, and affecting the behavior and attitude of the individual (Ahmed, 1981).

Ahmed (1981) classifies attitudes into collective and individual attitudes, general and qualitative attitudes, overt and covert attitudes, or positive, negative, and neutral attitudes.

Jalal (1984) indicates that there may be attitudes in which emotions are related to linguistic expression, and in this case the individual behaves in a manner that is satiated by speech, and other attitudes in which emotions are related to actual behavior, so the individual finds gratification from work.

Awad (1991) states that one of the attitudes is clear-cut for one individual and not clear for another individual, including an intermediate attitude associated with other attitudes and isolated and not related to others, including what is characterized by strength and continues with the individual long and weak that ends at the first storm .

It was classified by Zahran (2000) based on several criteria: 1- According to the subject: classified into a general and private attitude, 2- according to the number of individuals: classified into individual and collective, 3- according to clarity: classified into a public and secret attitude, 4- According to the force: it is classified into a strong and weak attitude, 5- according to the goal: it is classified into a positive and negative attitude.

Awad (1991) stresses the importance of attitudes in that they allow for prediction of individuals' response to certain situations and issues, as well as enabling the individual to defend himself by enabling him to achieve his economic and social goals, and facilitates him to deal with multiple psychological situations.

Al-Tunoubi (1999) indicates that attitudes also affect an individual's habits, tendencies, emotions, and methods of behavior, and that according to the compatibility of these psychological attitudes and their harmony, the strength of the

individual is, and according to our understanding of them, our understanding of the truth of his personal opinions.

Attitudes have four functions for the individual, namely the utilitarian function, the self-defense function, the value expression function, and the cognitive function (Jalal, 1984).

Hafez and Abdel-Rahman (2000) see that attitude functions are crystallized in: 1 - adapting to real life: by avoiding the expected dangers as well as trying to benefit from beneficial or acceptable things, 2 - reaching the appropriate degree of social adjustment for the individual: During the individual's path to his group's attitudes, 3 - Defending the ego: This psychological element is essentially the pattern or system of attitudes in which the individual is satiated during the different processes of socialization and normalization to which he is exposed.

There are several methods for measuring the attitude classified by Yunus (1978). They are: 1- Thurston scale, 2- Bougards scale, 3- Likert scale: Its scale consists of a set of phrases that the individual is asked to answer by expressing His opinion in terms of opposition or approval, and in front of each phrase there are degrees that vary in terms of strong approval to severe opposition (very agreeing, agreeing, cynical, disagreeing, and not agreeing at all), and the individuals who are being measured are asked to put an answer mark that expresses their opinion For each of the metric phrases, the metric phrases are chosen on the basis of setting a group of phrases related to the topic of The attitude of the measure to be measured, and then tested on a representative sample of the group of individuals to be applied the scale to, in order to know the validity of the phrases in measuring them for the attitude towards this topic, and the results obtained are analyzed statistically so that the statements that are not valid for measuring the attitude can be excluded, and the Likert method is characterized by ease of use and height The degree of stability and honesty of the scale also reduces the degree of guesswork and chance.

Al-Futtaim (1995) states that Likert scale is one of the widely used measures in the field of measuring psychological attitudes, because it does not consume a lot of effort or time, and it is concerned that all units of the scale measure the same subject as the attitude, and it is not necessary to use a group From the rulers to classify the phrases or items as the response to each of these phrases is graded on a graded scale.

Abu Tahoun (1998) believes that the steps to prepare a Likert scale consist of: A- Compilation of a number of expressions related to the subject for which a scale is intended to be built, bearing in mind that some of them are negative and others are positive, and it is desirable that those be from Whose response accepts the gradualism so that opinions vary between full approval and complete rejection, as well as phrases that represent a position or stimulus that challenges the individual and extracts from him the response that indicates his attitude actually, b- conducting the introductory application to experimenting with the phrases, c- then gives appropriate grades for individual responses Sample on phrases.

Ahmed (1978) outlines several conditions that must be met in the attitude scale: honesty, consistency, objectivity, and legalization.

From the above it can be said that: Attitudes is a psychosocial phenomenon that deserves attention and study.

It is seen as the perception of the individual towards people and towards issues and attitudes, and the attitude represents a meaning that links a person to a specific thing or event or a specific issue as a result of his passing with experience related to this thing or event, that is, no It consists in a vacuum but includes the relationship between the individual and the subject of the attitude, and the human response is either positive with acceptance and approval or negative with rejection and opposition, and the attitude is formed through the cultural framework in which the individual lives and his social interaction and keeping pace with the prevailing standards, values and beliefs of his society, and where Attitudes are the sources of energy directed to his behavior, and since they are educated like other types of human behavior, they can be controlled, controlled and modified, and the attitudes are characterized as being acquired and relatively fixed, and the attitude is of special importance in the life of the individual because it is considered directed and organized determinants of his behavior, and affects the speed And the efficiency of an individual's learning to determine the group he deals with and the profession he chooses for himself, as it allows for predicting the response of the individual to some situations and topics, and also affects his habits, inclinations and emotions, and helps to achieve the happiness and well-being of the individual through achieving his desired goals, attitude What is covered in this study are positions characterized by approval, rejection or impartiality, and at the same time they play a decisive role in accepting or rejecting something. Attitudes from this standpoint if they are positive towards the use of information and communication technology in agricultural work make the individual accept them driven by themselves no matter what The obstacles that stand in the way of that were, but if the attitudes are negative, it will not accept change unless these attitudes and attitudes change, which is determined by the degree that the students get researched on the scale used in the current study, where the high score on the scale indicates acceptance and follow-up Positive attitude towards the use of information and communication technology in agricultural work, while the low score on the scale indicates rejection and the negative attitude towards the use of this technology in agricultural work.

Nusrat (1995) defines youth as the next age group for adulthood and precocious, and may include chronological ages between (15-25 years), a stage full of energy, vigor, and the ability to acquire new information, knowledge, skills, and responsibility, in addition to the flexibility and lack of rigidity in human relations.

Ali (2003) defined the concept of youth according to a number of criteria represented in: 1 - The time criterion: where young people are defined as an age group that falls between fifteen and twenty-five years and may decrease or increase within two years before the starting point and after The end point is from this point, and this stage is not separated from the rest of the stages of life, especially childhood and adolescence, but rather it is an extension of this particular stage, 2- The gender criterion: This stage includes both sexes, male and female, 3- Biological criterion: This stage is distinguished With the completion of the organic and functional construction of the basic components of the body, such as the muscles, glands and Muscular anxiety and the growth of organs that have certain functions in building the body and completing the consistency of its

organs, 4- The mental standard: this stage is characterized by the growth of mental functions such as remembering, awareness, and imagination, along with the ability to creativity, innovation, scientific excellence, and acquiring mental skills, increasing the ability to make decisions and freedom to choose, 5- Psychological criterion: it is distinguished as the stage in which changes and advancement processes occur in the internal structure of personality and the relative stability in maturity in aspects of personality affected by the elements of genetics and environment, self-formation and individual awareness of reality and its emotional and cognitive needs in a form ZL, 6- The sociological criterion: it is characterized as the stage in which the individual absorbs the set of value orientations inherent in the social context through socialization in which the individual can achieve normal interaction and occupy a social position and perform his role in community building in accordance with existing and specific social interaction standards for relationships within society, Bearing in mind that all these components are complementary and interrelated.

Al-Shall (2005) determines that the importance of youth to society lies in what it represents from a source of renewal and change. Young people are the source of cultural and social change in society as a whole, and developed societies care for young people and provide him with all the needs and provide him with various services, in order to reach them and their societies to the desired goals in line with the goals and objectives of this society, taking advantage of all the energy and strength of youth and all that is characterized by enthusiasm.

Ghobari (2011) believes that young people play an effective role in achieving development goals with their capabilities and energies enabling them to effect changes in the structure of cultural, social and economic conditions, and in achieving equitable distribution of resources as partners in development projects, and that the human component is The real impetus for development, hence the concern for the necessity of human development, as the human being is the goal of development and the beneficiary of it. Therefore, development in our contemporary world has become one of the most important issues with increasing attention to it day by day in all developed and developing societies alike.

Omar (1978) states that agricultural extension is concerned with the development of all rural people in general without distinguishing between them, and therefore it provides guidance for farmers, guidance for rural women, and guidance for rural youth.

Suwailem (1998) indicates that the importance of guiding rural youth is due to several considerations, the most important of which are: 1 - young people play an important role in society, understanding the influencing force, huge work capacity, and productive group in society, 2 - young people are in Stage of preparation for responsibility and at the same time an actual exercise for it, and therefore they must be prepared to take responsibility through education and knowledge acquisition, 3- That changing youth attitudes is easier than for adults, and some studies have confirmed that young people are more supportive of agricultural extension and recommendations, 4- Young people are less committed Adhering to social norms impeding farmers' response to extension recommendations In particular, 5 - Young people

are more in harmony with the spirit of the age, learn modern cultural values, 6 - youth are flexible, which is a key aid in the processes of adapting to the situations they face, 7 - Rural youth in terms of numbers represent the majority of the Republic's youth and become responsible for Contributing to the economic, educational and youthful life in the village, 8- Rural youth tend to participate and cooperate and take responsibility if they are given the appropriate opportunity to do so. 9- The results of one of the studies demonstrated that rural parents continue to be guided by young people's information from children, for the most important reasons being the ease of contact with them and their feelings in The usefulness of their information, their confidence in them, their pride in them, their desire to benefit from the information of their children, and the children's ability to communicate information to their parents.

Suwailem (1998) states that the most important areas of rural youth counseling are: 1 - developing leadership, citizenship and collective decision-making among rural youth, 2 - urging young people to use research results in decision-making and appropriate solutions in solving their problems, 3- Familiarize young people with the most efficient use of available resources, 4- Take measures to preserve the health of young people and make good use of them for their spare time, 5- Create attitudes, abilities and concepts desired by young people for agricultural work, 6- Increase youth's interest in cooperative work, 7- Encourage young people to do business Agricultural on their own, 8- Training youth on various agricultural businesses, 9- stimulating youth financially and morally, 10- Instilling values of work appreciation in the hearts of youth as a major source of income.

Ashour (1990) defines the concept of distance education as an education that is conducted through the postal services, radio, telefax, telephone, and the newspaper, without direct contact between the teacher and the learner through a specially prepared material sent to the educated individuals, while observing them with criticism or correction.

Al-Jayoushi (1998) believes that it is a method of teaching where the learner is away from the teacher, and while the teachers are in direct contact with their students through the phone and the audio or video lecture, the learner's separation from the teacher means that he learns using some kind of means Connection.

Abdel-Hayy (2010) believes that the goals of distance education are: 1- Providing educational services to those who have missed the opportunity of education for reasons that belong to them or to the community and still have ambitions to develop themselves and improve their levels, 2- Providing educational conditions appropriate to the needs of learners to continue to Education, 3- Providing cultural programs for all citizens to sensitize them and develop their knowledge in various fields, 4- Contributing to women's education, training, and awareness of their role in various areas of life, 5- Keeping pace with ongoing knowledge and technical developments in various fields, 6- Contributing to literacy and adult education.

Ali (2012) identifies several characteristics of distance education, namely: 1- Meet the social, functional, and professional needs of those enrolled due to its flexibility, modernity, and the provision of alternatives on the one hand,

and its links to the labor market needs of qualified workers on the other hand, 2- Using this The pattern of education with the technological revolution and the revolution in communications and its main dependence on technological media and contemporary means of communication, 3- It depends on the systematic and systematic method of determining the study programs for students based on their professional and job needs in ways and methods and techniques in education characterized by flexibility, 4- Responding to a number of principles of education the modern human being, such as providing the motivation for learning and flexibility in the learning environment, taking into account the learning methods of individuals, and linking education to the professional, functional, personal and social needs of individuals, 5 - the ability to discover, analyze and interpret the learner's skills and capabilities and link that to educational programs, 6- to enable the learner to participate in education programs And teaching without obtaining an academic degree or any other certificates, 7 - The ability to accommodate an increasing number of learners without a significant increase in the cost of education, 8 - The possibility of using assessment and tests as diagnostic tools to analyze the extent of achieving the education goals.

Abd Al-Hamid (2010) states that the most important educational media used in distance education systems in general are: printed material, video tapes, satellites, CDs, educational bags, radio, audio tapes, computer, And the Internet.

Al-Baali (2011) shows that the means of distance education in agricultural extension include landline, mobile, personal letters, technical bulletin, newsletter, guide, light bulletin, guide, agricultural articles in newspapers, videos, and television , Radio, cassette tapes, internet, vircon, radon, periodic letters, posters, and computer CDs. This research will be limited to Internet technology:

The Internet is the network that changed the way individuals communicate, interact, and exchange services and information, as it represents a changing model, a collaborative medium that can be accessed to information and data, and a place for diverse experiences in all fields through a group of infinite computers connected together which It broadcasts and sends its information on independent computers around the world (Al-Ali, 2005).

Abdel Halim (2006) believes that the Internet is a disjointed set of millions of computers located in millions of places around the world, and users of these computers can use other computers to obtain information. Al-Jubouri (2016) states that it is a huge network of computers spanning the globe in all its countries, and it is an open global network that makes the subscriber able to access thousands of different sources and services in the field of knowledge.

Abu Rayya (2006) identifies the advantages of the Internet as follows: 1- Speed and assurance of information transmission, 2- Speed of information, 3- Document exchange, 4- Talking, consulting and holding conferences, 5- Entertainment and entertainment, 6- Shopping through The Internet, 7-discussion groups. Al-Ani and Shawqi (2008) indicate that the Internet provides several services: 1- Email, 2- Chat, 3- Search Engines, 4- Electronic Sites, 5- Electronic Business

Qasim (2008) crystallizes that agricultural extension can take advantage of the internet's ability in many ways, including: 1- Providing the expenses required for printing, distributing, and storing extension brochures from the extension apparatus to extension centers or farmers by reducing the number of copies printed, 2- The possibility of updating the information available in all extension centers or with farmers at one time and at the same time as it was created. 3- Providing dynamic information such as weather, marketing, pests, etc., 4- Providing the opportunity between farmers and agricultural experts directly through forums or chat (chat) or Mail Show me or extension sites on the network, 5- Take advantage of the interactive features of online communication that allow the use of expert agricultural systems, and direct learning from extension programs, 6- Expand the extension services department by providing the opportunity for universities and commercial agricultural institutions to participate in what we can call the extension community through The Internet, 7- Providing the opportunity to view the guiding sites in the world and exchange experiences with them, 8- Taking advantage of the feature of identifying the number and quality of visitors to the guiding sites on the network, to identify the areas of interest of the guiding audience, and the type of problems that It faces them to support extension programs in these areas, 9- Facilitating interaction between farmers and the extension organization across the network, which provides an opportunity to participate with large farmers who may be difficult for the extension to conduct personal interviews with or influence them, 10- Communications with farmers across the network help to avoid personal influence that It may happen from some farmers during extension meetings or personal contacts, which may put other farmers in embarrassing situations to express their opinions, which may sometimes negatively affect the plans and indicative programs, 11- take advantage of the interactive feature of the network in teleconferencing or workshops For the work or audio meetings between experts and farmers, 12- The feature of indicative educational use directed to farmers via the network (distance extension) is superior to distance university education in that the learning outcome directly affects agricultural production, and that feedback is a realistic agricultural or rural problem or problem Instructional directly unlike academic distance learning, the benefit of which is limited to obtaining a certificate, and feedback is also limited to students' problems of understanding or assimilation, 13- The extension system can expand from the concept of agricultural development to the concept of rural development by integrating with the body Other dealing with the Internet such as the Ministry of Irrigation, the Ministry of Health, universities, the Ministry of Education, the Ministry of Local Government and others, 14- The extension organization can take advantage of the advantages of remote dealing in the process of managing the extension system, where reports and extension programs can be exchanged between the central levels , Regional and Field, 15- Defining indicative needs in partnership between program planners and implementers and the farming audience through teleconferencing.

We draw from studies that have been carried out in this field, such as the study of Abdul Salam (1998), the study of Taya (2000), the study of Falcon (2009), the study of Al-Mikhlaifi (2011), the study of Hamid (2011), the study of Mustafa (2011), the study of Abdul Razek and Jumana and Thanaa ( 2012), Al-Hamuli Study (2013), Al-Shafi'i and

Hussein Study (2013), Al-Shafi'i, Ahmed and Rida (2014), Al-Dhahabi Study (2014), Hajras Study (2014), Al-Hamuli, Abdul-Khaliq and Muhammad Study (2015), and Abdul Wahid and Sami Study (2015), Abu Zaid and Ahmad (2016), Abdul Wahid (2015), Kings, Ziad and Kamal (2016), and Kings (2016). It is centered around two main axes:

1- Studies related to attitudes focus on studying the factors related to the students' attitudes, building a measure of attitudes, identifying its sincerity and consistency, studying attitudes towards innovations and the work of rural women, their attitude towards agricultural extension, the environment and its protection from pollution, volunteer work and settlement in new areas, contract farming, training Extension, maintenance of agricultural lands, attitudes towards separating farm management from agricultural ownership, use of mobile phones in extension work, and electronic guide methods.

Most of them were based on Likert scale to measure the attitude after making standardized measures and testing their validity through academic arbitrators who are relevant to the fields of study, and based on the clarification of their data on statistical methods suitable for the objectives of the study such as the percentage, averages, correlation and regression relationships and the specific factors in their respective fields and reached results It has implications for the importance of studying attitudes and relying on them to bring about desired changes in social, economic and behavioral activities.

2- Studies related to information and communications technology, including the Internet, and focused on the motives for using the Internet and its use in the Arab world, the social effects of modern communication technology and its relationship to university youth attitudes towards social problems, suggestions for developing their information technology skills, acceptance of communication technology decisions at the extension apparatus, and program effectiveness Indicative of the use of information technology, the desire to use the computer by the youth to obtain agricultural information, and the ability of the mentors to use that in the extension work with some pain Portfolios, as well as supervisory supervisors, the possibility to benefit from the means of distance education, and the use of this technology in agricultural cooperative societies and their role in supporting decision-making.

All of them are studies related to the importance of information and communication technology in agricultural work, and its role in disseminating and adopting modern ideas among the masses of farmers in the practical life of developing the rural and agricultural sectors, which is what the current period requires in order to achieve the desired goals to improve the lives of the population. These studies have recommended the importance of information and communication technology in life. The process and the necessity of absorbing and adopting it because of its comparative advantage for acquiring scientific information and knowledge.

Based on the foregoing, this research will be concerned with studying the attitudes of students of the Faculty of Agriculture at Kafr El-Sheikh University, Egypt, and students at the Faculty of Agriculture at the University of Kirkuk, Iraq towards the use of the Internet in agricultural work by building a scale to measure the attitudes of the researched students towards the use of the Internet in

agricultural work, then identify the quality The attitudes of these research students towards the use of the Internet in agricultural work in Egypt and Iraq.

Also, this research will study the effect of some independent variables that may have an impact on the dependent variable, which is: number of family members, education of the head of the family, monthly family income, exposure to agricultural information sources, acquisition of information and communications technology means, ambition, and experience with agricultural work, Dealing with the mobile phone, dealing with the computer, dealing with the Internet, knowledge of the benefits of using information and communication technology and the attitude towards agricultural work.

## Materials and Methods

### First: procedural definitions

This part includes an explanation of the concepts and variables mentioned in the research and an explanation of its implications according to the research requirements, based on the scientific and theoretical concepts that were agreed upon by the previous scientific writings, and they are:

**1. The researched students:** means individuals from the university youth in the age range ranging between (18-22 years) who are studying in the undergraduate stage (the second, third and fourth year) at the Faculty of Agriculture, Kafr El-Sheikh University in Egypt and the Faculty of Agriculture University of Kirkuk, Iraq at the time of collecting field data.

**2. Type:** It is intended to determine the gender of the students respondents (male and female), and this variable was measured by giving the students the two scores in terms of being male and one degree for females.

**3. Social upbringing:** means whether the upbringing of the students in the countryside or the city, and the respondent was given two grades for his rural upbringing, and one for the urban upbringing.

**4. level of study:** It refers to the students who are affiliated with each of the second, third and fourth grades according to the records of the college students.

**5. Academic specialization:** It means the scientific field to which the students belong to, according to the specializations available in the college of each of them, and the specializations of the students with a bachelors in agriculture, whether in the field of horticulture, animal production, crops, soil, forests, agricultural or general guidance or engineering, were identified Agricultural, dairy, pesticides or plant diseases.

**6. Number of family members:** It is the total number of family members of the students who were respondents at the time of collecting the research data.

**7. Education of the head of the family:** It means the degree of education of the head of the family of the students, and was measured by giving the head of the family of the subjects the degrees (zero) in terms of being illiterate, and (3) degrees in the case of being reading and writing, and (6) degrees for the holder of the primary, And (9) degrees for those with prep, (12) degrees for those with secondary school, (14) degrees for those with an above-average

qualification, (16) degrees for those with a university degree, and (20) degrees for those with a university degree above.

**8. Agricultural Information Sources:** means the sources from which the respondents learn from their agricultural information, and it was measured by asking the respondents about its information sources from among the sixteen of the sources that might be used to obtain this information, the number of sources used by it was given to give a value that reflects About this variable.

**9. Exposure to agricultural informational sources:** It means the extent of exposure of students to any of the sources from which they obtain their agricultural information, and was measured by asking the respondents about sixteen of the sources that might be used to obtain this information, on a graduated scale (always, sometimes, rarely, or no), and scores (3, 2, 1, and zero) were given, respectively, then these scores were combined to give a value that expresses this variable.

**10. Possession of means of communication:** means the means of communication that the students possess in terms of being a "desktop" computer, laptop, mobile phone, iPad, or landline or shared phone in the Internet. To give a value that expresses this variable.

**11. The level of ambition:** It means the extent of the students' aspiration to continuously improve the standard of living for themselves and their families in a way that achieves material and social gain, and was measured by asking the respondent about his desire that he wishes to work in his future life after graduation in seven areas represented in: (working in a remote field On agriculture, working for the faculty of the faculty, working in the field of agricultural scientific research and the agricultural research center, completing the research to obtain a higher degree, working in the field of agricultural education, working with an agricultural job, obtaining a plot of land and cultivating it), and grades 1, 2, and 3 were given, 4, 5, 6, and 7, respectively, and then I compiled this Grades to reflect this variable.

**12. Agricultural Experience:** This refers to the number of years spent by students in practicing agricultural work and the extent of their participation with family members in agricultural work, whether or not, and this variable was measured by asking the researcher about the extent of his contribution to agricultural work before and during his enrollment in the college or not, and in terms of being a little contribution Or medium or large and grades were given (1, 2, 3) respectively, then he was asked about his participation in agricultural work whether or not it is present and future by answering the respondent yes or no, and grades (2, 1) were given respectively and then the grades were combined to express this variable.

**13. Treatment of computer:** It means the extent of ownership and use of the computer or not, the nature of the computer in terms of being desktops or laptop computers, and the level of students' use of the computer in terms of being advanced, medium, or weak or He does not know, and two grades were given in the case of having a laptop computer, and one degree in the case of having a desktop computer "Desktops", and the grades (3, 2, 1, and zero) were given, respectively, in terms of being "advanced, medium, Weak, and it is not known "to the level of their use of the



computer (computer), then these grades were combined to give a value that expresses this variable.

**14. Treatment of Internet:** It means the extent to which students in question use and communicate with the Internet, the type of device used the rate of its use of the Internet, and the nature of the sites it browses on the Internet. This variable was measured by asking the students who searched for their use of the Internet or not and gave (one degree) in the case of yes, and (zero) in the case of no, as it gave (3 degrees) in the case of the presence of the Internet on his computer and his mobile phone together, (two grades) in the case of the presence of the Internet on the mobile only, and (one degree) in the case of the presence of the Internet on Computer only, as it was given (4 degrees) in the case of daily use of the Internet, and (3 degrees) in the case of weekly use, (two grades) in the case of monthly use, (one degree) in the case of its use is rarely necessary, and (one degree) for each of the seven sites presented to it, then these grades were combined to express this variable.

**15. Using the Internet to get agricultural ideas:** It means the extent of the students' use of the Internet to obtain agricultural ideas or not, and gave the respondent (one degree) in case he gets agricultural ideas from Facebook, and (zero) if he did not get that He also gave (one degree) for each field he browsed in, then gave grades (3, 2, 1) in the event that Facebook is appropriate or somewhat appropriate or not suitable for obtaining agricultural ideas, respectively, then these grades were combined to express this variable .

**16. Knowledge of the benefits of using the Internet:** It means the extent of the students' knowledge of the benefits of using the Internet in agricultural work or not, and this variable was measured by giving respondents (one degree) to the answer with the presence of interest, and (zero) in the absence of interest for it, as it was given (1 score) for each valid benefit they mentioned regarding the benefits of using the internet in agricultural work, and then these degrees were combined to express this variable.

**17. The attitude towards agricultural work:** It means the degree of inclination of the students seeking towards agricultural work in general and the use of the Internet in particular, whether this response is negative, positive or neutral, and it was measured through an index consisting of twelve phrases that used a Likert scale consisting of three degrees It is (OK, Cyan, and Disagree) so that the grades (3, 2, 1) are given respectively for positive phrases, and vice versa (1, 2, 3) is a score for negative phrases, and by adding the scores obtained by the respondents, the total score that crosses For this variable, its coefficient of stability was 0,799, and its validity was 0,894.

**18. The attitude towards using the Internet in agricultural work:** It means the degree of inclination of students seeking to use the Internet in agricultural work or not, and this variable was measured by asking them about the extent of their agreement to the content of 23 terms that have a quantitative measure consisting of three degrees is (OK , Sian, and disagree) so that the grades (3, 2, 1) are given respectively for positive phrases, and the opposite (1, 2,3) is a score for negative phrases (10, 13, 19, 23), and by adding the scores obtained by the students Scale phrases The overall score that expresses their attitudes toward using the Internet in agricultural work can be obtained.

## Second: Research Variables:

**Through a reference review related to the subject of the research, which was made available for review, the opinion settled on choosing a set of research variables that can be classified into two groups:**

**A- Independent variables:** were represented by a number of distinctive characteristics of students of the Faculty of Agriculture at Kafr El-Sheikh University in Egypt, and students of the Faculty of Agriculture at the University of Kirkuk/ Iraq, which may have an impact on the dependent variable under consideration. These variables were: the number of family members, and the education of the head of the family, Agricultural information sources, exposure to agricultural information sources, acquisition of means of communication, level of ambition, agricultural experience, dealing with computers, dealing with the Internet, use of the Internet to obtain agricultural ideas, knowledge of the benefits of using the Internet, and the attitude towards agricultural work.

**B - Dependent variable:** this variable represented in the attitude of the research students towards using the Internet in agricultural work.

## Third: Research hypotheses:

According to the research objectives and based on the theoretical framework and the results of previous studies reviewed in this field, it has been possible to formulate the hypotheses of this research as follows:

- 1- There are no significant differences between the average scores of the Egyptian and Iraqi students' attitudes toward using the Internet in agricultural work.
- 2- There is no correlation between each of the following independent variables: number of family members, head of household education, agricultural information sources, exposure to agricultural information sources, acquisition of means of communication, level of ambition, agricultural experience, dealing with computers, dealing with the Internet, use of The Internet in obtaining agricultural ideas, knowledge of the benefits of using the Internet, the attitude towards agricultural work and the degree of the attitude of the students looking towards using the Internet in agricultural work as a dependent variable.
- 3- There is no correlation among the independent variables included in the research combined and the degree of attitude of the research students towards using the Internet in agricultural work as a dependent variable.
- 4- Each of the independent variables included in the research contributes significantly to the explanation of the difference in the degree of attitude of the researched students towards use in agricultural work as a dependent variable.

These hypotheses have been tested in their zero form (imposition of nothingness).

## Fourth: Research area:

The Faculty of Agriculture at Kafr El-Sheikh University in Egypt and the Faculty of Agriculture at the University of Kirkuk in Iraq were chosen to conduct this research, where the Faculty of Agriculture is located at Kafr El-Sheikh University in Kafr El-Sheikh Governorate, and the Faculty of

Agriculture at the University of Kirkuk in the governorate of Kirkuk, and each of them has the scientific side in which the researchers work, out of an attempt to link scientific authorities The surrounding environment.

**Fifth: Comprehensive and research sample:**

This research was conducted on students of the Faculty of Agriculture at Kafr El-Sheikh University in Egypt and students of the Faculty of Agriculture at the University of Kirkuk, Iraq, with each of the second group, the third group, and the fourth group, where the Egyptian total number is 1261 students, and the students were counted in each group, reaching 553 students in the second group , And 389 male and female students in the third year, and 319 male and female students in the fourth year, and a sample of them was taken for research at 10%, so its size reached 126 respondents distributed in each academic group according to the proportion of the overall representation of each group in the overall college, it was 55 respondents in the second group, and 39 respondents in the third group , And 32 subjects in the ground squad Seven, and they were chosen in a random, regular manner, according to the records of students affairs in the Faculty of Agriculture, Table (1).

The Iraqi comprehensive was also identified, reaching 522 male and female students, of whom 23% were chosen as a sample, reaching 120 respondents, and each study group was distributed according to the proportion of the overall representation of each group in the overall college. They were chosen in a random, regular manner, based on the records of students 'affairs in the Faculty of Agriculture, Table (1).

**Table 1 :** Comprehensive distribution and sample of students respondents.

Study level	Research community		Sample volume	
	Iraq	Egypt	Iraq	Egypt
The second	113	553	26	55
The third	153	389	35	39
Fourth	256	319	59	32
Total	522	1261	120	126

Source: College Student Affairs Records, unpublished data, 2018/2019.

**Sixth: Preparing and testing the questionnaire:**

The research relied on two sources to obtain data, the first of which are the secondary sources, which are the records of students in student affairs at the Faculty of Agriculture, Kafr El-Sheikh University in Egypt and the Faculty of Agriculture, Kirkuk University in Iraq, the second is the primary sources through a personal interview for each of the selected sample of male and female students through a questionnaire previously prepared to achieve Research objectives: The design and preparation of the form has been taken into account in the clarity and accuracy of the phrases and questions that were mentioned in a manner consistent with the culture of Egyptian and Iraqi society. A preliminary test was conducted for the form by applying it to number of (12) students who were randomly selected from the three study groups selected, Hence, the form became valid in its final form suitable for collecting research data.

**Seventh: Data Collection:**

The data of this research was collected by means of the personal interview questionnaire from the individuals of the research sample, during the months of March and April of 2019, and the questionnaire forms from both samples were 100% completed.

**Eighth: Data analysis:**

After completing the data, it was reviewed to ensure the correctness of its contents, then unloading the data, tabulating it, scheduling and classifying it according to the research objectives, then entering it into the computer, and the statistical program (SPSS, Version 16) was used with Statistical Package for Social Sciences. And standard deviation, as simple and multiple correlation coefficients and partial and multiple regression coefficients were used, and Step-Wise Multiple (Regression) model was used to identify the most independent variables affecting the dependent variable, in addition to that I used test The stability, honesty, and realism indicators of the scale of students 'attitude towards using the Internet in agricultural work.

**Ninth: Measuring attitudes:**

It is to determine the attitudes of the researched students towards the use of the Internet in agricultural work, and this variable was measured by preparing a quantitative measure of the attitudes of students respondents towards the use of the Internet in agricultural work guided by the Likert scale. The preparation of this scale went through the following stages:

- A- The stage of preparing the basic image of the scale: According to the theoretical framework of the research, (23) phrases were formulated according to Likert method that covers the three components of the attitude (cognitive, emotional, and nazi) component towards using the Internet in agricultural work, and the response to each phrase was a triple scale scale consisting of "Agree, Neutral, Disagree", and then the initial check was made to verify the relevance of these phrases with the component to be measured or not, so that these phrases form the basis for preparing the scale in its initial form. The scale included 23 terms, including 8 phrases for the cognitive component, and 7 phrases For the emotional component, and 8 phrases for the voluntary component, from it A 17 positive phrases, and 6 negative phrases.
- B- The stage of preparing the primary image of the scale: at this stage, the scale expressions were presented in its initial form to a group of 11 arbitrators who hold a PhD degree in the field of agricultural extension or rural society working in the faculties of agriculture and the Institute of Agricultural Extension Research and Rural Development at the Agricultural Research Center, He asked each arbitrator to clarify his opinion in front of each phrase in terms of its suitability to measure the component it represents or not by choosing one of the following responses: "valid, somewhat valid, invalid" and according to the opinions of these arbitrators, statements that did not have 75% approval will be deleted From the arbitrators in The axis of the three axes of the scale to represent the rest of the terms of the scale of the initial image in each axis.
- C- The stage of the experimental image of the scale: This stage was conducted on a random sample of 246

respondents from students of the Faculty of Agriculture, Kafr El-Sheikh University in Egypt and students of the Faculty of Agriculture, Kirkuk University in Iraq, and the data was met by personal interview using a questionnaire form to determine each of them the extent of his response for each phrase, where he gave the respondents Grades (3, 2, 1) If his response is "OK, Sian, and Disagree" respectively for positive statements, and vice versa (1, 2, 3) in the case of negative statements, and after emptying the data, each respondent will have a score for each phrase, and a degree for each Component (epistemic, emotional, and haptic), and a total scale for the scale, then calculated with Fill in the correlation between each phrase with the overall score of the component and the scale, and delete the non-significant expressions.

D- **Scale Reliability:** To determine the scale stability factor, 1- The Cronbach formula, which Khairi (1987) mentioned, is used:

$$R = \frac{N}{N-1} \left( 1 - \frac{\sum S^2 E}{S^2} \right)$$

R= Scale stability coefficient

N= Number of phrases scale

S<sup>2</sup>E= Sum of variations of scale phrases

S<sup>2</sup> = Scale variation= (Square standard deviation of the scale)

2- **Split half method:** Calculating the Pearson coefficient to estimate the consistency between the halves of each axis scale. A statistical correction of the stability factor will be made using the following Spearman-Brown Formula equation mentioned by Al-seed (1979).

$$R_{aa} = \frac{r^2}{1+r}$$

R<sub>aa</sub> = Axis scale stability factor

r = Correlation coefficient between the degrees of odd and even halves of the scale of each axis.

E-**Scale Validity:** To estimate the validity of the scale, six types of validity were used:

1- **Face Validity:** Measured the apparent sincerity of the scale by displaying the scale statements to a group of arbitrators (11 arbitrators) as previously indicated in the basic picture display of the scale, where each of them expressed his opinion in front of each phrase in terms of being valid or to some extent valid or invalid, And these responses were given scores (3, 2, and 1), respectively, then by dividing the sum of the scores in each phrase by their maximum score for each phrase which is 22 degrees and then multiplying by 100 a value is obtained that expresses the percentage of validity of the phrase, and according to For this arbitration, the terms that obtain 75% or more of the arbitrators' approval will be retained.

2- **Logical Validity:** This honesty was measured for each term separately from the scale metrics in its final form in order to verify the extent to which the phrases represent the concept that you measure, and this honesty was estimated for each individual phrase of the metric phrases in its final form according to the following formula mentioned by Abdul Rahman (1971).

$$V = M + \frac{0.5 - \sum L}{F} \times K$$

V= The degree of truthfulness of the scale phrases for each of the three axes

M= The minimum of the supervisory category, which is where the largest number of arbitrators gather.

L= The sum of the percentages that fall before the subject group

F= The percentage of the number of arbitrators in the assigned category, which is equal to the number of arbitrators in this category divided by the total number of arbitrators

K= The extent of the category is expressed in the correct one.

**3- Internal Consistency:** means the consistency of the part with the whole, and can be expressed by the internal connections between the expressions and the total degree of the component to which these expressions belong, as well as between them and the overall degree of the component on the scale to which it belongs, (Khairi, 1978), and (Hammam *et al.*, 1989). Accordingly, formative honesty in this research was determined through four axes:

**First:** determining the consistency of each phrase of the scale with the overall degree of the scale.

**Second:** Determine the consistency of each phrase of the knowledge component with the total degree of this component.

**Third:** determining the consistency of each of the expressions of the emotional component with the total degree of this component.

**Fourth:** Determining the consistency of each of the expressive component phrases with the total degree of this component.

**4- Intrinsic Validity** The self-honesty coefficient of the scale was measured using the following equation mentioned by Alseed. (1979).

$$\text{Intrinsic Validity} = \sqrt{\text{Coefficient of stability}}$$

**5-Statistical Validity:** The statistical validity of the scale was measured according to the following equation which was mentioned by Muharram (1979).

$$v.c = \frac{n \times r}{1 + (n-1)r}$$

v.c = Honesty scale axis coefficient.

r = Average coefficients of terms correlation with the overall score for the scale.

n = The number of axle scale units.

**6. Content Validity:** Content validity was measured for the scale of each of the three components with the same formula used in measuring statistical truthfulness, as content validity is one of the types of statistical validity.

**H-Scale Realistic:** The degree of realism of the scale units for each of the four axes was estimated based on the opinions of the arbitrators, using the following Hovstatr function as mentioned by Al-Sharnoubi (1977):

$$\text{ScaleRealistic} = \frac{\text{Arbitrator approved \% non-approved arbitrator \%}}{\text{neutral arbitrator \%}}$$

- The degree of realism is low when its value is less than 1 degree.
- The degree of realism is average when the range is from 1 to 2.49 degrees.
- The degree of realism is above average when its range is from 2.5 to 4.99 degrees.
- The degree of realism is high when the range is from 5 to 10 degrees.
- The degree of realism is very high if it exceeds 10 degrees.

G- The final scale: After conducting the previous tests according to the predetermined stages, the phrases that do not meet the previous conditions will be deleted so that the scale in its final form becomes valid to measure the attitude of the students researched towards using the Internet in agricultural work.

**Results and Discussion**

**First- Building and codifying the scale of attitudes of the students respondents in Egypt and Iraq towards using the Internet in agricultural work.**

The process of building a measure of the respondents' attitudes toward using the Internet in agricultural work passes through four stages, which can be presented as follows:

**A- Analysis of scale units**

The results showed in Table (2) that the mean values of the respondents' attitude towards using the Internet in agricultural work for each phrase of the scale ranged from (1.97 - 2,83) degrees, and the values of the standard deviation of these phrases ranged between (0,43- 0,89) degrees, and this is evidenced by the concentration of these values in limited and small-range categories.

**Table 2 :** Values of mean, standard deviation and variance of units of measure of the scale

No.	Mean	Standard deviation	Variance	No.	Mean	Standard deviation	Variance
1	2.83	0.43	.188	13	2.43	0.75	.564
2	2.76	0.51	.265	14	2.38	0.76	.571
3	2.57	0.67	.450	15	1.97	0.89	.799
4	2.70	0.53	.285	16	2.54	0.65	.421
5	2.64	0.56	.312	17	2.43	0.72	.507
6	2.64	0.59	.346	18	2.48	0.67	.446
7	2.71	0.57	.322	19	2.30	0.84	.691
8	2.74	0.54	.285	20	2.54	0.67	.446
9	2.48	0.72	.512	21	2.52	0.66	.430
10	2.28	0.77	.588	22	2.57	0.66	.435
11	2.46	0.71	.503	23	2.32	0.77	.586
12	2.34	0.73	.536				

**Scale Reliability:A**

The results of using the Cronbach Formula to estimate the stability of the scale revealed that the value of the "R" constant has reached about 0,822, which is a high value of the stability factor and evidence of the scale's stability.

$$R = \frac{N}{N-1} \left( 1 - \frac{\sum S^2 E}{S^2} \right)$$

$$R = \frac{23}{23-1} \left( 1 - \frac{10.488}{49.817} \right)$$

$$R = 0.822$$

When calculating the stability coefficient by the half-way split method, the scale expressions were divided into two even and even divisions, and according to the correlation coefficient between the two sections, it amounted to 0.775, which is a significant value at the probability level of 0.01, which represents the stability coefficient of the half-scale, and after ensuring that there is no discrepancy between the two halves of the scale using the "t" test As the calculated

value of "T" was 1,072, which is an insignificant value at a probability level of 0.05, he made a statistical correction of the stability factor using the "Spearman-Brown" equation, and its value was 0.689, which is also a high value for the stability of the scale.

**B: Scale Validity:**

The results related to the validity assessment of the scale, which relied on the use of six types of honesty, showed that:

**1- Logical Validity :**

The results showed in Table (3) that the value of the logical validity of the scale statements ranged between (1.59- 1,89) degrees, and these values are close to the maximum degree of the scale (two degrees), and this means that each phrase of the scale statements is characterized by a high logical sincerity factor.

$$V = M + \frac{0.5 - \sum L}{F} \times K$$

**Table 3 :** The degree of logical validity to terms of the measure of the attitude of students respondents towards use of the Internet in agricultural work.

No.	Valid		Fairly Valid		Not Valid		H	Z	X	Y	Logical Validity
	No.	w.	No.	w.	No.	w.					
1	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
2	8	0.73	2	0.09	1	0.09	1.5	0.27	0.73	1	1.82
3	8	0.73	2	0.09	1	0.09	1.5	0.27	0.73	1	1.82
4	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
5	6	0.55	3	0.27	2	0.18	1.5	0.45	0.55	1	1.59
6	7	0.64	2	0.09	2	0.09	1.5	0.36	0.64	1	1.72
7	6	0.55	3	0.27	2	0.18	1.5	0.45	0.55	1	1.59
8	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
9	6	0.55	2	0.18	3	0.27	1.5	0.45	0.55	1	1.59
10	6	0.55	3	0.27	2	0.18	1.5	0.45	0.55	1	1.59
11	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
12	9	0.82	2	0.18	0	0.0	1.5	0.18	0.82	1	1.89
13	8	0.73	2	0.09	1	0.09	1.5	0.27	0.73	1	1.82
14	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
15	6	0.55	2	0.18	3	0.27	1.5	0.45	0.55	1	1.59
16	8	0.73	2	0.09	1	0.09	1.5	0.27	0.73	1	1.82
17	9	0.82	2	0.18	0	0.0	1.5	0.18	0.82	1	1.89
18	9	0.82	2	0.18	0	0.0	1.5	0.18	0.82	1	1.89
19	8	0.73	2	0.09	1	0.09	1.5	0.27	0.73	1	1.82
20	8	0.73	3	0.27	0	0.0	1.5	0.27	0.73	1	1.82
21	9	0.82	1	0.09	1	0.09	1.5	0.18	0.82	1	1.89
22	9	0.82	2	0.18	0	0.0	1.5	0.18	0.82	1	1.89
23	7	0.64	2	0.09	2	0.09	1.5	0.36	0.64	1	1.72

**2- Construct Validity or consistency Internal**

The results showed in Table (4) related to the formative validity of the scale in this research through four axes: First: All the values of correlation coefficients for each of the 8 cognitive component phrases with the total score for this component were significant values at probability level 0,01, and ranged from (0,495-0,720), and this shows the achievement of the internal consistency of the cognitive component phrases with the total degree of this component.

**The second:** that all the values of the correlation coefficients for each of the 7 expressions of the emotional component and the total degree of this component were significant values at

a probability level of 0.01, and ranged from (0,322- 0.664), and this confirms the achievement of the internal consistency of the expressions of the emotional component With the total score for this component.

**The third:** that all the values of the correlation coefficients for each of the 9 expressive component phrases with the total degree of this component were significant values at a probability level of 0.01, they ranged from (0.289-0.593), and this reflects the achievement of the internal consistency of the expressive component’s expressions with The total score for this component

**Table 4 :** Pearson correlation coefficients between scale statements and total score for each component and for the total scale degree

Components	Statement No.	Know. component	Sense component	Action component	Total attitude
Knowledge component	1	.692**	.260**	.234**	.486**
	2	.720**	.277**	.309**	.541**
	3	.495**	.155*	.152*	.323**
	4	.556**	.224**	.175**	.456**
	5	.652**	.300**	.202**	.567**
	6	.618**	.253**	.269**	.515**
	7	.607**	.322**	.314**	.517**
	8	.645**	.279**	.295**	.504**
Sense Component	9	.362**	.524**	.206**	.523**
	10	.057	.322**	.106	.222**
	11	.369**	.570**	.282**	.587**
	12	.297**	.407**	.180**	.396**
	13	.271	.392**	.054	.372**

Components	Statement No.	Know. component	Sense component	Action component	Total attitude
	14	.099	.431**	.163*	.308**
	15	.109	.641**	.179**	.244**
Action Component	16	.402**	.296**	.476**	.507**
	17	.339**	.298**	.428**	.511**
	18	.267**	.274**	.315**	.445**
	19	.134*	.104	.289**	.239**
	20	.396**	.310**	.399**	.503**
	21	.163*	.179**	.593**	.291**
	22	.250**	.296**	.453**	.438**
	23	.090	.110	.305**	.219**

\*\* Significant about level 0.01

\* Significant about level 0.05

The fourth: that all the values of the correlation coefficients for each of the 23 terms of the scale with the total degree of the scale were significant values, where 23 of them were significant at a probability level of 0.01, and ranged from (0.219 - 0.587), and this shows the existence of internal consistency Between the scale statements and the overall scale of the scale.

**3- Intrinsic Validity:**

The results revealed that the Intrinsic Validity

$$= \sqrt{\text{lu coefficient of stability } y} = \sqrt{0.822}$$

$$= 0.907$$

It is a high validity coefficient of the scale.

**4- Statistical Validity:**

The results showed that by applying the statistical validity equation represented in:

$$v.c. = \frac{n \times r}{1 + (n - 1)r}$$

$$v.c. = \frac{23 \times 0.456}{1 + (23 - 1)0.456}$$

$$v.c. = \frac{10.488}{11.032} = 0.951$$

Consequently, the value of the statistical validity amounted to 0,951, which is a high value, which confirms the statistical validity of the scale.

**5- Content Validity:**

The results indicated that the value of the validity of the content of the scale of the cognitive component reached about 0.930

$$v.c. = \frac{n \times r}{1 + (n - 1)r}$$

$$v.c. = \frac{8 \times 0.623}{1 + (8 - 1)0.623}$$

$$v.c. = \frac{4.984}{5.361}$$

$$= 0.930$$

As for the emotional component, the value of content validity was about 0.861

$$v.c. = \frac{n \times r}{1 + (n - 1)r}$$

$$v.c. = \frac{7 \times 0.470}{1 + (7 - 1)0.470}$$

$$v.c. = \frac{3.290}{3.820}$$

$$= 0.861$$

As for the ingredient component, the validity value of the content was about 0.846

$$v.c. = \frac{n \times r}{1 + (n - 1)r}$$

$$v.c. = \frac{8 \times 0.623}{1 + (8 - 1)0.623}$$

$$v.c. = \frac{4.984}{5.361}$$

$$= 0.846$$

Accordingly, it is clear that these values for the validity of the content were high, which confirms the validity of the scale content. From the above, there is an internal consistency of the expressions for each of the three components of the scale with the overall degree of the component, and then a high degree of formative validity or the internal consistency of the scale is confirmed.

**6- Scale Realistic:**

The results indicated in Table (5) that all the scale statements were of a very high degree of realism, and therefore it is clear that the phrases that make up the scale have a high degree of realism.

$$\text{Scale Realistic} = \frac{\text{Arbitrators approved\%} * \text{non - approved arbitrators\%}}{\text{neutral arbitrators\%}}$$

**Table 5 :** Values of realistic degree phrases measure the attitude of students towards the use of the internet in agricultural work.

No.	Approvers		Neutrals		Opponents		Degree of realism
	N	%	N	%	N	%	
1	9	82	1	9	1	9	82
2	8	73	2	9	1	9	73
3	8	73	2	9	1	9	73
4	9	82	1	9	1	9	82
5	6	55	3	27	2	18	36.67
6	7	64	2	9	2	9	64
7	6	55	3	27	2	18	36.67
8	9	82	1	9	1	9	82
9	6	55	2	18	3	27	82.5
10	6	55	3	27	2	18	36.67
11	9	82	1	9	1	9	82
12	7	64	3	27	1	9	21.33
13	8	73	2	18	1	9	36.5
14	9	82	1	9	1	9	82
15	6	55	2	18	3	27	82.5
16	8	73	2	18	1	9	36.5
17	7	64	2	9	2	9	64
18	7	64	3	27	1	9	21.33
19	8	73	2	18	1	9	36.5
20	8	73	2	18	1	9	36.5
21	9	82	1	9	1	9	82
22	9	82	1	9	1	9	82
23	7	64	1	9	3	27	192

Source: from the questionnaires

n= 11

From the above, it is clear that the scale has a high stability factor and high honesty coefficients, with the scale also being realistic. Therefore, the scale has become in its final form, including 23 phrases, including 8 phrases to measure the cognitive component, and the number 7 phrases for the emotional component, and the number 8 terms for the tendency component, and it was from These phrases have 17 positive phrases and 6 negative phrases.

#### Second: Identify some characteristics of students of the Agriculture Faculty in the two research samples.

The results showed in table (6) that 64.3% and 54.2% of the Egyptian and Iraqi sample were students, that 52.4% of

the Egyptian sample were urbanized, while 82.5% of the Iraqi sample were urbanized, and 61.1% Of the Egyptian sample, the size of their family was small, while 62,5% of the Iraqi sample were average family size, and 42.9% of the Egyptian sample was in the fourth level, while 70,8% of the Iraqi sample was in the second level, and 17,5% of the sample Egyptian women were agricultural engineering, 12.7% of them were crops, 29.2% of the Iraqi sample was animal production, and 27.5% were field crops. And that 27.5% of the parents of the Iraqi sample are highly educated, compared to 6.3% of the Egyptian sample. And that 54.8% and 75% of the Egyptian and Iraqi sample are many agricultural information sources, respectively.

**Table 6 :** Some characters for the Egyptian and Iraq samples

Characters	Egypt. S.		Iraq S.		Characters	Egypt. S.		Iraq S.	
	No	%	No	%		No	%	No	%
<b>Genus</b>					<b>Socialization</b>				
Male	45	35.7	55	46.8	Rural	60	47.6	99	82.5
Female	81	64.3	65	54.2	Urban	66	52.4	21	17.5
<b>Number of family persons</b>					<b>Level of study</b>				
small (2-5) person	77	61.1	35	29.2	Second	55	43.7	26	21.7
person) 6-9 (medium	49	38.9	75	62.5	Third	39	31.0	35	29.1
person 10- 13) (Big	0	0.0	10	8.3	Fourth	32	25.3	59	49.2

Departments					Education of Father				
Horticulture	14	11.1	24	20.0	Literature	3	2.4	9	7.5
Animal production	15	11.9	35	29.2	Read and Write	32	25.5	0	0.0
Crops	16	12.7	33	27.5	<b>Learn:</b>				
Soil	12	9.6	12	10.0	degree) 6-9(Low	8	6.3	42	35.0
Forests	-	-	16	13.3	Medium (10-14) degree	75	59.5	36	30.0
Agric. Extension	6	4.8	-	-	(15-18) degree High	8	6.3	33	27.5
Agric. Engineering	22	17.5	-	-	<b>Agric. Information sources</b>				
Milk	11	8.7	-	-	Little (1-4) source	9	7.1	6	5.0
Pesticides	11	8.7	-	-	Medium (5-9) source	48	38.1	24	20.0
Microbiology	9	7.1	-	-	Much (10-13) source	69	54.8	90	75.0
General dept.	10	7.9	-	-	<b>Level of ambition</b>				
<b>Communication tools</b>					Non 0 degree	0	0.0	4	3.3
Little (1-2) tool	27	21.4	103	85.8	degree (1-2) Low	29	23.0	105	87.5
Medium (3-4) tool	77	61.1	14	11.7	Medium (3-4) degree	58	46.0	8	6.7
Much (5-6) tool	22	17.5	3	2.5	(5-6) degree High	39	31.0	3	2.5
<b>Exposure to agric. Inf. Sources</b>					<b>Agricultural Experience's</b>				
degree (1-13) Low	18	14.3	12	9.5	Non 0 degree	0	0.0	61	50.8
Medium (14-26) degree	72	57.1	85	70.8	degree (1-2) Low	12	9.6	5	4.2
(27-39) degree High	36	28.6	23	18.3	Medium (3-5) degree	89	70.6	32	26.7
<b>Treatment of computer</b>					(6-7) degree High	25	19.8	22	18.3
Non 0 degree	0	0.0	6	5.0	<b>Treatment of Internet</b>				
degree (1-2) Low	5	4.0	34	28.3	degree (1-5) Low	4	3.2	19	15.8
Medium (3-4) degree	26	20.6	59	49.2	Medium (6-10) degree	55	43.6	84	70.0
(5-6) degree High	95	75.4	21	17.5	(11-15) degree High	67	53.2	17	14.2
<b>Use of Internet to agric. Ideas</b>					<b>Knowledge of internet advantages</b>				
Non 0 degree	49	38.9	28	23.3	Non 0 degree	17	13.5	10	8.3
degree (2-6) Low	33	26.2	84	70.0	degree (1-2) Low	21	16.7	47	39.2
Medium (7-11) degree	23	18.2	8	6.7	Medium (3-5) degree	29	23.0	50	41.7
(12-16) degree High	21	16.7	0	0.0	(6-7) degree High	59	46.8	13	10.8
<b>Attitude toward agric. Work</b>					<b>Total</b>	<b>126</b>	<b>100.0</b>	<b>120</b>	<b>100.0</b>
degree (12-19) disagree	89	70.6	4	3.3					
Medium (20-28) degree	29	23.0	49	40.9					
(29-36) degree Agree	8	6.4	67	55.8					
Total	126	100.0	120	100.0					

Source: Data of the questionnaires

### Third- Determining the attitudes of the students respondents towards the use of the Internet in agricultural work in Egypt and Iraq.

The results also showed in Table (6) that 61.1% of the Egyptian sample are medium means of communication, while 85.8% of the Iraqi sample are few means. In addition, 46% of the Egyptian sample had an average ambition level, while 87.5% of the Iraqi sample had low ambition, in addition to 3.3% of them with no ambition. In addition, that 57.1% and 70.8% of the Egyptian and Iraqi sample had an average exposure to agricultural information sources. And that 70.6% of the Egyptian sample have medium agricultural experience, while 50.8% of the Iraqi sample have no experience; this may be due to the fact that the majority of them are of urban origin. It was also found that 75.4% of the Egyptian sample had a high degree of interaction with the computer, while 49.2% of the Iraqi sample had an average interaction in addition to 5% of them who did not deal with the computer. In addition, that 53.2% of the Egyptian sample were dealing with the Internet high, while 70% of the Iraqi sample was average in dealing with the Internet. Moreover,

38.9% of the Egyptian sample did not use the Internet to obtain agricultural ideas, while 70% of the Iraqi sample used it, but to a low degree. In addition, that 46.8% of the Egyptian sample are familiar with the benefits of the Internet with a high degree, and 41.7% of the Iraqi sample know the benefits of the Internet with a moderate degree. It was also found that 70.6% of the Egyptian sample had opposing attitudes towards agricultural work, while 55.8% of the Iraqi sample had a favorable attitude towards agricultural work.

The results showed in Table (7) that 1.6% of the Egyptian sample had a dissenting tendency to use the Internet in agricultural work, 30.9% of them had a neutral attitude, and 67.5% of them had a favorable attitude. While 1.7% of the Iraqi sample were against their use of the Internet in agricultural work, 16.7% of them were neutral, and 81.6% of them were in favor of using the Internet in agricultural work.

From the above it is clear that the majority of the respondents from the two samples enjoy positive tendencies towards using the Internet in agricultural work, and this is probably due to the diversity of agricultural information sources for the majority of them and that the majority of



them are exposed to agricultural information sources with a degree ranging between medium and high and that the majority of them deal with the Internet to a degree ranging between medium and high.

**Table 7 :** Distribution of the respondents students according to their tendency to use the Internet in agricultural work

Attitude toward internet using in the Agricultural Work	Egyptian Sample		Iraq Sample	
	N	%	N	%
degree (23-37) disagree	2	1.6	2	1.7
Medium (38-53) degree	39	30.9	20	16.7
(54-69) degree Agree	85	67.5	98	81.6
Total	126	100.0	120	100.0

Source: Data of the questionnaires.

Upon identifying the significance of the differences between the degrees of the attitude of the two research samples towards the use of the Internet in agricultural work, it was found that there were significant differences between the degree of orientation of the Egyptian and Iraqi sample, where the value of T reached (-2,308), which is a significant

value at the level of 0.01, where the Iraqi sample excelled in terms of The degree of its attitude towards the use of the Internet in agricultural work, perhaps due to the fact that approximately two thirds of the Iraqi sample have a positive attitude towards agricultural work, as in Table (8).

**Table 8 :** The t-test results to differences between Egyptian and Iraq samples.

T-Test:	Samples	N	mini	max	Mean	Std. Dev.	T value
The attitude toward internet use in agric. Work	Egypt	126	36	69	56.53	6.66	-2.308 **
	Iraq	120	28	69	58.59	7.34	

**Fourth:** -Study of the correlations among the attitudes of the respondents towards the agricultural work as a dependent variable and the following independent variables: number of family members, education of the head of the family, agricultural information sources, exposure to agricultural information sources, possession of means of communication, level of ambition, agricultural experience, dealing with computers, and dealing With the Internet, the use of the Internet to get agricultural ideas, knowledge of the benefits of using the Internet, and the attitude towards agricultural work.

Table 9 results indicated that there was a significant correlative relationship at probability level 0,01 between the degree of respondents' attitudes toward using the internet in agricultural work and between each of the agricultural information sources variable, the exposure to agricultural information sources, the variable of communication means,

**Table 9 :** The Correlations Relations between the independent variables and respondents attitude toward use of the internet in the agricultural work

No	The variables	R
1	Family size	.062
2	Father education	-.001
3	Agricultural information sources	.305**
4	Exposure to agric. information sources	.191**
5	Communication means	.156**
6	Level of ambition	.153**
7	Agricultural experts	.203**
8	Computer treatment	-.089
9	Internet treatment	-.092
10	Getting agricultural ideas by internet	.001
11	Knowledge of internet benefits	.143*
12	Attitude toward the agricultural work	.213**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

the level of ambition, the variable of agricultural experience, and a variable The attitude towards agricultural work, where the value of the simple correlation coefficient between them was 0.305, 0.191, 0.156, 0.153, 0.203 and 0.213, respectively.

The results showed that there was a significant direct correlation relationship at the 0.05 probability level between the degree of the respondents' attitudes towards using the Internet in agricultural work and the variable of knowledge of the benefits of the Internet.

The relationship of relationship with the variables of family size, father's education, dealing with computers, dealing with the Internet, and obtaining agricultural ideas from the Internet has not been established, and accordingly the first research hypothesis can be partially accepted.

**Fifth- Study of the regression relations among the respondents' attitudes towards agricultural work as a dependent variable and the group of studied independent variables.**

The results in Table (10) revealed that the studied independent variables, which correlated with their correlation relationship with the degree of respondents' attitudes toward using the Internet in agricultural work with a multiple correlation coefficient of 0.499, which is a significant value at the probability level 0,01 based on the value of P, reached 6,427 , And the value of the determination coefficient was about 0.2249, and this result indicates that these combined independent variables explain approximately 25% of the total variance that occurs in the dependent variable.

This means that there are other independent variables that the research did not touch upon, which has an effect on the degree of the researchers' attitudes towards using the Internet in agricultural work, and this result supports the validity of the third research hypothesis.

**Table 10 :** The Regression Relations between the independent variables and respondents attitude toward use of the internet in the agricultural work

No	The variables	B	Beta	T	Sig.
1	Family size	-.093	-.025	-.391	.696
2	Father education	-.007	-.005	-.086	.932
3	Agricultural information sources	.437	.172	2.340	.020
4	Exposure to agric. information sources	.012	.012	.173	.863
5	Communication means	1.060	.212	2.760	.006
6	Level of ambition	.826	.205	2.792	.006
7	Agricultural experts	.385	.126	1.873	.062
8	Computer treatment	.659	-.141	-1.896	.059
9	Internet treatment	-.161	-.078	-1.234	.218
10	Getting agricultural ideas by internet	-.085	-.049	-.819	.413
11	Knowledge of internet benefits	.374	.096	1.546	.124
12	Attitude toward the agricultural work	.359	.339	4.643	.000

Constant =42.692\*\* F= 6.427\*\* R= .499 R2= .249

To know the contribution of each of the independent variables that have proven statistically significant in their interpretation of the variance in the degree of respondents' attitudes toward using the Internet in agricultural work as a dependent variable, the results of the regression analysis showed that there are five independent variables that explain about 23% of the variance in the dependent variable, where a variable contributed Agricultural information sources by 9.3%, the variable of agricultural experience by 2.8%, the

attitude towards agricultural work by 4.2%, the variable of communication means by 3.3%, and the level of ambition by 1.9%. This result shows how important it is to take into account diversification of agricultural information sources for researchers and benefit from their agricultural experiences and their love for agricultural work and the presence of many means of communication with them and their high level of ambition in changing their attitudes towards using the Internet in agricultural work, Table (11).

**Table 11 :** The stepwise regression relations between the independent variables and respondents attitude toward use of the internet in the agricultural work

The variables	B	t	R	R 2	%	Ra
Agricultural information sources	.446	2.905**	.305	.093	9.3	1
Agricultural experts	.384	1.953**	.348	.121	2.8	2
Attitude toward the agricultural work	.358	4.783**	.404	.163	4.2	3
Communication means	1.178	3.141**	.443	.196	3.3	4
Level of ambition	.831	2.917**	.464	.215	1.9	5

Constant= 15.206 F= 12.170\*\* R= 0.484 R2= 0.234

**Sixth- Determining the obstacles to using the Internet in agricultural work from the viewpoint of the students respondents in Egypt and Iraq and their proposals to overcome them.**

**A. Obstacles:**

(95.2%) of the Egyptian sample indicated that one of the most important obstacles to using the Internet in agricultural work was the weakness of the internet service, followed by the high costs of subscribing to the Internet

service and by (88.9%) of the research sample, among (86.5%) of the respondents in the Egyptian sample The continuous power outages are a hindrance to the use of the internet in agricultural work, whereas the cessation of the internet service is also a hindrance, according to what (81%) of the respondents indicated, while the lack of respondents' lack of experience in using the Internet came in the last rank among the obstacles mentioned by (76.2%) of the students were respondents in the Egyptian sample.

**Table 12 :** Obstacles of using the Internet in agricultural work from the point of view to the Egyptian and Iraqi samples

No.	Obstacles	N	%
<b>Egyptian sample</b>			
1	Poor internet service	120	95.2
2	High Internet subscription costs	112	88.9
3	Power off continuously	109	86.5
4	Frequent Internet crashes	102	81.0
5	Prevalence of illiteracy among some farmers	100	79.4
6	Not holding training courses in the field of using computers	97	77.0
7	Non-proficiency of farmers using computers	96	76.2
<b>Iraqi sample</b>			
1	Poor internet service	32	26.7
2	Inaccurate information on the Internet	32	26.7

No.	Obstacles	N	%
<b>Egyptian sample</b>			
3	High Internet subscription costs	28	23.3
4	Some farmers do not own smartphones	25	20.8
5	Engaging in non-agricultural applications.	25	20.8
6	Constant blackouts	24	20
7	The internet is not always available	23	19.2
8	Failure to obtain the required information through the Internet	23	19.2
9	The ignorance of the peasants, especially the elderly, over the internet	22	18.3
10	The length of articles on the Internet published on agriculture	20	16.7
11	Lack of experience in using the Internet	17	14.2
12	Looking at the agriculture profession is a negative one	9	7.5
13	The lack of free time for farmers to surf the Internet	7	5.8

Source: from the questionnaires

N(Egypt)= 126 N(Iraq)= 120

The Iraqi sample stated that there are 13 handicapped persons facing the use of the Internet in agricultural work, the foremost of which is the handicap of weak internet service and the impediment of the inaccuracy of information spread on the Internet, as (26.7%) of the students respondents agreed on this, while the handicap of high internet subscription costs came in the rank The third, at a rate of (23.3%) of the respondents, and (20.8%) of the respondents agreed that the lack of possession of some smart phones by the farmers and the preoccupation with non-agricultural applications that hinder the use of the Internet in agricultural work, while the lack of free time for farmers to surf the Internet came in the rank The last among the handicaps.

### B- Suggests

The results showed in Table (13) that (93.7%) of the respondents in the Egyptian sample suggested improving the internet service to benefit from it in agricultural work, and

(89.7%) of them suggested setting up appropriate publicity about the importance of using the Internet in agricultural work, and stressed (87.3%) Among them is the need to hold training courses on how to use the Internet and the computer, while (79.4%) indicated the need to improve the internet service, and (77.8%) of the students respondents stressed the importance of providing adequate agricultural information to the beneficiaries.

With regard to the Iraqi sample, (35.8%) of the respondents emphasized the necessity of using social media to spread agricultural ideas, and they also proposed publishing agricultural information in a brief and interesting way, as well as providing internet in rural areas, as well as setting up courses to teach farmers and extension workers on how to use the Internet and use it to spread Agricultural ideas and increase the speed of the Internet and reduce the costs of subscribing to it, as shown in Table (13).

**Table 13 :** Suggests of Egyptian and Iraqi samples for improving using the Internet in agricultural work

No.	Suggests	N	%
<b>Egyptian sample</b>			
1	Improved Internet Service	118	93.7
2	Making Suitable publicity about the importance of using the Internet in agricultural work	113	89.7
3	Training courses about how to use the Internet and computer	110	87.3
4	Improve electricity service	100	79.4
5	Provide adequate agricultural information to beneficiaries	98	77.8
<b>Iraqi sample</b>			
1	Using social media to spread agricultural ideas	43	35.8
2	The publication of agricultural information in a concise and interesting way	33	27.5
3	Providing internet in rural areas	30	25
4	Holding courses to teach farmers how to use the Internet	25	20.8
5	Holding agricultural extension courses on how to spread agricultural ideas	25	20.8
6	Increase internet speed	23	19.2
7	Encourage farmers to own smartphones	22	18.3
8	Work on the continuity of the electrical current	20	16.7
9	Reducing internet subscription costs	20	16.7
10	Block unwanted sites	15	12.5
11	Relying on reliable electronic agricultural sources	13	10.8

Source: from the questionnaires

N(Egypt)= 126 N(Iraq)= 120

### Conclusions and recommendations

#### First: Conclusions.

According to the results of the study, the researchers concluded the following:

- 1- The more sources of agricultural information there are, the more favorable the students' attitudes towards using the Internet in agricultural work.
- 2- The students of the Egyptian and Iraqi faculties of agriculture did not differ from each other in most of the

characteristics studied, which means the similarity of the demographics and indicates that the research community in both samples is closely related to the personal, social and communication characteristics

- 3- The environment in which the student lives has a major impact in crystallizing his attitudes positively towards employing agricultural ideas in a way that serves the environment in which he lives and seeks to develop it.
- 4- The high level of ambition of the Egyptian sample and its decrease for the Iraqi students justifies the instability in Iraq, which was negatively reflected on the level of their ambition and their vision of a clear future in which their efforts to draw that future are reflected in a bright way
- 5- The reliance of any society on a source of national income greatly contributes to pushing the people of that community to increase knowledge and develop experiences on that source, and this justifies the high experience of students in Egyptian society, which depends primarily on agriculture, and its decline in relation to Iraqi society, which is not dependent on. The current time is on agriculture, but rather on oil as a main source of national income.
- 6- The increase in students' communication methods, including the Internet, has contributed significantly to a positive change in their attitude towards the use of these methods in agricultural work.

### Second: Recommendations

Accordingly, the researchers recommend the following:

- 1- Adopting the attitude measure adopted by this study in conducting other studies in the same field.
- 2- Conducting studies on students of agricultural colleges in other Iraqi and Egyptian universities.
- 3- Increasing students' exposure to modern scientific means of communication and working to raise their level of ambition for a better future
- 4- Addressing the problems facing the availability of internet service, its speed and the costs of subscribing to it in both countries.
- 5- Be careful and honest in the agricultural information that is circulated on the Internet, as it is the source of the information for many researchers and farmers.

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