# The Role of distance learning via the Internet in Learning Programming: Learners' Point of View

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Abstract:: The current research aims toidentify the role of distance learning via the Internet in learning programming for fourth-preparatory school students, as it is their first experience in the field of learning and application in the 2018-2019 academic year. one of the main reasons for resorting to this type of learning is the limited time of the weekly lesson flearning programming, within the computer lessons scheduled as one session per week for the fifth preparatory school students. This leads to deficiencies in some scientific aspects of programming, which are considered one of the most important demands of development and the needs of the present era that the learners must be adequately trained on. This experiment was applied to the community of 100 learners, by providing computerlessons for programming in the language of Visual Basic, in its sixth version, and sending those lessons through the educational group assigned to them through the simplest social media sites so that answers clarify the role of this learning from the sample consisting of 40 participants. Their opinions were obtained by applying the questionnaire. The research found that distance learning via the Internet has a significant role in achieving the goals that were set by the Ministry of Education for the computer subject, specifically the programming forthe fourth preparatory class, which included the skill, cognitive and emotional field. It was found that there is a high degree of accomplishment achieved by distance learning via the Internet was for the emotional domain. The study suggested a set of statements related to the interest in this type of learning and the pursuit of its development to be used in an ideal manner to help the learners.

**keywords:** Distance learning; online learning; learning via social media; visual basic programming; electronic computerized learning.

### The first topic: Definition of the research problem

### 1. Research problem:

The current research is concerned with clarifying the role of distance learning via the Internet, especially in the subject of programming for the computer subject, as this type of teaching and learning has become one of the most prominent features of the modern era, and is also newer, especially with its pattern based on the Internet that allows the possibility of completing it via distance learning, which achieves ease in communication and many positive benefits for the learner and even for the teacher who provides his learners with the materials and topics to be learned.

The computer subject is learned in the preparatory studies for the fourth and fifth grades of middle school is taught in one session per class per week, which is not considered support for learning, especially in the programming side, as the learner must take theoretical information and practical work to be able to apply the series of programs in the fourth intermediate book, which can not be covered by one lesson.

In light of all these issues, it isclear that it is vitally necessary to include this type of education viasocial media(henceforth SM) and at distance education, not only because it is a change and keeps pace with modernity, but because it is supportive and a starting point for the gradual shift to full employment of this style of teaching/learning, as well as it must not be limited to computer subject, but rather, it is in all other subjects. This can be approved if this new style of teaching /learning shows to be experimentally positive in the context of this research.

The problem of this research can be formulated by the following question:

Does distance learning via the Internet have a significant role in students learning Visual Basic 6.0 program for the computer subject from their point of view?

### 1. The importance of the study

The researcher finds that the importance of the research is clustered in the following statements 1. Conducting a new educational experiment to learn the item of the curricular courses, as well as working to open new horizons in this aspect.

2. Providing constant communication on programming topics in Visual Basic among the learners themselves and their teacher via the Internet within the educational group.

3. Directing learners to the benefitsof spending their time on the Internet for learning.

4. Highlighting the possibility of applying this to other computer subjects or other disciplines if this experience is achieved and its positive among the learners.

5. Introducing learners to this type of learning, which opens the horizons of free learning that are not linked to a curriculum and even to other fields, for its adoption for distance learning as well.

6. Identifying the obstacles that may be encountered when implementing this experiment, and formulas to avoid these obstacles for future experiments.

7. Highlighting the role of young learners, with acquainting them with the importance of assessing the level of learning that is presented to them, in which distance learning is employed asynchronously, and thus seeking to develop it from several aspects.

### 3. Study Objective

The items listed below summarize the importance of research that aims to identify:

1. The role of online distance education in learning visual basic programing, in its sixth edition for the fourth preparatory school.

2. Distinguish the great impact of the role of distance learning in the field of (skill, emotional, and cognitive) from the learners' point of view.

### 4. Limitations

The current study is limited to the following:

Spatial limits: Fourth-grade students at Taleb Al-Suhail High School for theDistinguished, where the experiment was applied to them remotely via the SM-Facebook.

Time limit: the second course for the academic year 2018-2019.

Cognitive limit: programming subject, the visual basic language, the sixth edition of the computer book for the fourth year of preparatory school, in its 2014 edition, which is the approved edition when conducting the research

## **5.** Basic terms Definitions

### First: online distance learning:

### Imran and Bakhit (2015) define it as:

'Providing learners through SM the opportunity to follow the teacher's directions, present questions to him, and apply direct experiment without the need for a face to face interaction' (p. 124).

The researcher theoretically defined it as: providing learners with cognitive skills, performance and affective aspects based on the subject matter by directly relying on electronic media managed remotely, using the Internet, and asynchronously.

### The researcher defines it practically as:

It is learning the items of the lessons included in the course of the computer course for the second course, which is concerned with programming Visual Basic version 6, using the Internet and asynchronouslyand remotely by adopting the school-based learning group devoted to this goal, which was created within SM- Facebook.

### Second: Programming:

Rabat and Al-Masry (2011) define it as:

The language in which programs are written to be performed on the computer to provide the required services to programmers in that language (p. 51).

### The researcher theoretically defines programming as:

A series of steps applied according to a language accepted by computers and some tablets, through which commands and instructions can be performed, and desired results can achieve the goalsfrom each program designed.

### The researcher defines programming practically as:

Dealing with regular sequential steps with the software application through which the learner can employ the commands of the Visual Basic version VI application, and deal with the component interfaces and the ability to employ this in the creation of projects and the application of various programming instructions to design various programs according to its instructions and capabilities and according to the objectives to be achieved.

### Third: The Learners:

### Collinitz III and Patricia (2008) define the learners as:

Individuals are given specific educational learning materials so that they can learn these materials in a variety of locations by adopting different methods and techniques, and their learning can be self-directed (p. 564).

### The researcher theoretically defines them as:

Beneficiaries of learning a programmatic subject, which is learned according to an educational system based on one of the educational institution's curricular decisions established for them within one of the classes of their academic stages, and for one or all of its materials.

### Practically, the researcher defines them as:

They are students of the sixth class of programming in the visual basic language, among the fourth year of middle school students, who are undergoing a distance learning experiment via the Internet.

# The second topic: the theoretical framework Theoretical background and previous studies The first axis: distance education via networks

### • Education technology and distance education (DE) over networks:

One of the most important roles of modern technology is to deliver the required information in a limited time and easily to users. So; the most prominent areas that can be benefited from are the educational field and learning education according to the research vision. Distance teaching and learning is a type of education that aims to deliver information to learners at different times that are not limited to the time specified for them or while they are in an educational institution, but rather extends to more than these limitations, where we find that a large proportion of the negatives and obstacles can be overcome to a large extent when applying DE. DE acts as a facilitator for the learning process, providing learners with various knowledge and fields whenever they want and at any time, they see fit.

Elyan and Al-Debs (2003) explained that Instruction Technology is part of Educational Technology, because instruction is a subset of Education, and not a single concept and that education technology is an integrated and complex process. At the same time, as it includes individuals, methods, and all requirements, which education technology does not concern of, and thus the characteristics of educational technology can be determined as follows:

- 1. Learning is purposive and Controlled
- 2. Pre-structured
- 3. Design, Selection & Utilization

Therefore, when at least two of those three criteria are met (design, selection, use); At a time, any educational technology resource can be accepted, while the educational technology resource is required to meet at least two of the aforementioned three criteria, and (design, use) or (selection, use) should have been prepared in advance. Under the Light of Orientation and Control (pp. 207-208).

Ashtiwa and Mustafa (2015) believe that educational technology, in light of systems theory, is concerned with designing education and learning, about which different opinions struggle through the designing knowledge and curricula to be planned according to it, and it aims at learning based on technology and modernity, not rigidly compatible with the educational curriculum. they find that there is the stage foreach educational position and educational environment. There is an educational model that is different from the others, which leads to the creation of several models dealing with the design of educational programs, most of which aim to answer the following questions:

a. What are the goals to be achieved?

B. What are the conditions under which learners will work to achieve these goals?

T. To what extent were these goals achieved? (P. 56).

The objectives of learning, in general, are to achieve a set of goals. These goals can be classified as shown by Rabat and Al-Masry (2011) in terms of achieving them within the areas shown as follows:

- 1. The skilled field (psychomotor).
- 2. The emotional field.

3. The Cognitive field. (P. 95)

### Types of distance learning via the Internet:

Al-Hilah and Mari (2011) explain that the model of distance education and learning using the Internet is preferred for application in the future information society, which will lead to less use of earth materials such as pens, papers, and transportation, to become the least expensive compared to the traditional, while saving human effort and time developing the human, who remains in need for lifelong learning (p. 406).

DE is based on the individual's right to access and make educational opportunities available without being bound by limitations as in traditional education and without relying on the necessity of face to face meeting between the teacher and the learner, but rather on the transfer of skill and knowledge to learners depending on visual or audio technologies or both; It was distinguished, and that the most technologies that worked to support this type of learning are computer and network technologies, as well as disks and video programs (Rabah, 2015, p. 15), and Shawahin (2015) explains that distance learning via the Internet is in one of two forms:

1. Synchronous

2. Asynchronous

As simultaneous learning requires the presence of the teacher and the learner at the same time, depending on the Internet or any network that connects computers, and asynchronous learning is more independent in choosing the time, so that it does not require the presence of the teacher with the learner at the same time, so that the teacher can add the knowledge material on the web site, the learner can access knowledge material at any time (p. 19), and it is important to determine the most appropriate way to deliver the required knowledge to learners so that it is parallel with the level of the learners and their characteristics, so that several considerations are taken into account, including the attitudes of the learners' knowledge, skills, and abilities, which leads to the diversification of the relevant educational teaching aids with the content to be taught to them (Al-Khaz'leh, 2015, p. 30).

Schwahin (2015) shows that online distance learning can be used to develop any of the following skills:

1. Cognitive, which requires comprehensionand understanding scientific terminology.

2. Following (procedural) instructions and applying what has been trained in new problem-solving situations (i.e. higher thinking skills).

3. Interpersonal skills (such as participating in effective listening, negotiation, and making presentations).

4. Motor skills based on intelligence (visual/spatial), such as driving and mastering games. (P. 15)

### Features of distance learning (online) over traditional learning:

The main difference between learning through computer software and learning through networks as determined by Azmi (2014) is the possibility of direct interaction and simultaneous communication between the teacher and the learners and the learners themselves. Learning interactively, as we find that networks have provided three basic types of what interaction requires for distance learning, namely:

1. Interaction between the content and the learner.

2. Interaction between learners and the teacher.

3. Interaction between learners.

All of this can be achieved when connecting to the online distance learning site, either in its simultaneous or asynchronous form (p. 48). Al-Saud (2009) also adds that the advantages of distance education and learning via the Internet, which made it preferable to classroom teaching and learning are as follows

1. Introducing a modern culture to learners called digital culture based on processing knowledge, making the learner the focus of the educational process instead of the teacher, while the class's reliance on concern for knowledge production and making the teacher the focus of the educational process.

2. Not requiring the presence in the same place and time to receive the remote learning process synchronously and asynchronously, unlike the classroom, which obliges the teacher and the learner to be present at the same time and place.

3. The electronic realization of the principle of uniqueness in education through the performance of this type of learning is done automatically. This is the opposite of the principle of passive reception of the classroom learner in the traditional way.

4. The knowledge content is more motivational.

5. It achieves the freedom to communicate with the teacher at unspecified times and by using multiple means such as e-mail, virtual chat rooms, and other applications and sites, which exceed the specific time for the class during school hours.

6. The teacher's role is to guide, direct and provide advice, different from the traditional one whose role is to inform the students.

7. Because it is based on the needs of the individual; It takes into its consideration the individual differences.

8. It develops the learner's creative and critical ability, in contrast to the traditional one that relies on memorization and retrieving.

9. The possibility of updating the educational materials presented electronically according to modernity, which leads to addressing the stagnation of educational materials used within traditional teaching and learning (pp. 285\_287).

The current study relied on the interaction between the learners and the teacher, and among learners themselves more than (the interaction between the content and the learner). The latter adopted the presentation of the content in those lessons, and it does not include rearranging, synthesis, or formulation of its topics. Rather, it was adopted and based on the explanatory texts accompanying the practicalsoftware application designed as a video that is shown to them in a series of computerized lessons.

### The second axis:

### Visual Basic 6.0 programming

The programming language (Visual Basic) in its sixth edition is considered one of the most prominent programming languages with a graphical interface, according to which the programmer can design programs with great capabilities in many areas of life, whether educational, application or even administrative, and it is produced by Microsoft, the leader in the production of software of wide variety, popularity, meticulous design, and implementation. the programmer in general and students, in particular, can design a variety of programs within them, ranging in level of difficulty from simple to more complex with detailed serving various fields. Halverson (1999) stated that Visual Basic is a program that works to perform tasks It enables users to write effective programs that are compatible with Windows operating system, and it works according to some basic instructions and commands and programming procedures in it (p. 27).

Currently, a group of newer versions of this programming language has appeared, noting that this language was fully compatible with the versions of many operating systems, but there havebeen changesforthe stop of support, after the launch of several newer versions of it, which led to the difficulty of the work and practically applying it by many students on their modern personal computers, incompatible with these versions.

This programming language consists of the main interface that includes implicit tapes and commands, and a toolbox with several characteristics of each object, and it is operated in several ways that have been demonstrated within the lessons intended to learn the topic of the current study, as well as it featured of accuracy and ease of design, implementation, and tracking of outcomes.

### The third axis

### Instructional design and programming techniques used via the Internet

### • Educational technology and computerized educational software:

The design of education is concerned with describing the theoretical principles in addition to the practical procedures related to how to carry out the preparation of school and general education and learning programs in a way that works to achieve the desired objectives, so; it is science related to planning the elements of the educational learning process in addition to analyzing, organizing and forming them before starting the implementation (Al-Shannaq& Hassan, 2009, p. 257).

The role of educational learning techniques is to search for methods and tools that achieve greater and better learning with less effort and cost. therefore; we find at present that it is not considered a marginal issue within the educational learning process, but rather a systematic and organized process that we find in the systems approach as a basis for conducting, implementing, and evaluating the teaching and learning process by the goals set to bring about learning among the learners while aiming to achieve the greatest level of educational competencies in quantity and quality. it also seeks to target the structure and content of learning (Al-Haila& Mari, 2011, p. 57).

The computer is one of the most prominent technologies used to support learners to acquire various knowledge and skills, as it includes multimedia that guarantee the most appropriate clarification of the subjects and sciences that are desired to be learned, so we find that (2014) Eyadatillustrated the importance of using these media to produce curricular topics with knowledge and mastery of the components of it, such as applications of editing drawings, photos, films, and simulations of actual programs, etc. (p. 235), and despite all the technical capabilities, it cannot be done adequately without a teacher.

This is supported by Daams (2015), as he finds that educational technology cannot be a tool of transmission and communication on its own without qualified teachers who can integrate it into the curriculum to develop learners' learning, the teacher is the basis despite the use of technology (p. 286), and the use of computers led to considering it asan ideal solution to the needs of learners by providing educational and educational software to a large number of learners on a specific topic (Eyadat, 2014, p. 59), and we find that learning is provided via networks and the Internet, in general, is subjected to planning as stages as explained by Al-Haila and Mari (2011):

1. The stage of determining the needs of the learners.

- 2. The goal development stage.
- 3. The stage of organizing the content.
- 4. The stage of organizing and arranging information.
- 5. The evaluation stage. (Pp. 383-384)

### • Designed software

Hirsch et al. (2012) show that the principles of designing software that is used in education as follows:

- 1. The philosophical and psychological basis
- 2. The technical basis

### 3. Basic requirements for designing educational software

The current study relied on employing a program that works to record the way to deal with the Visual Basic programming language easily and clearly with the possibility of adding some technical touches that make this software an attractive learning method for the learner. While selecting the accompanying music that does not

confuse the student. This music is characterized as calm, stimulating, and learner-tense, in addition to the explanatory phrases for each of these performances, with Camtasia Studio, which provides the possibility of zooming the pictorial audio interface during its design and then adding the required selections and appropriate explanations to achieve the goals of each topic.

Mazen (2009) also described the computerized educational program as the materials used in learning, which were prepared and programmed using the computer to affect learning, and the process of preparing them depends on the principle of response and reinforcement that Skinner explained in his theory that was based on the importance of responding from the learner with positive reinforcement by the teacher or the computer (p. 204).

Elements of Multimedia Technology:

The main system shows the basic elements of the technology based on the introduction of multimedia used to prepare presentations of that interactive multimedia technology, these elements are:

1. Written texts.

2. Spoken language.

- 3. Sound effects.
- 4. Drawings and plans.
- 5. Pictures, static drawing, and animation.

6. Virtual Reality. (Al-Khaza'leh, 2015: p. 115)

We also find audiovisual communications that combined the concepts of communication, systems, system components, and the concept of learning theory for the existence of interaction that embodies the approach of systems between each of the two theories of learning and communication, which show a presentation of basic concepts to define the field of educational technology (Al-Haila and Mari, 2011: p. 35).

### • The application used to deliver the material to distance learners and its management mechanism:

Undoubtedly, the Internet is one of the most important networks which its role has emerged in distance learning with its modern content, which supported learners with a learning environment at anytime and anywhere.

It is clear thatsocial networking sites play a crucial role in spreading information quickly, and the importance attached to most groups of society, especially the young group that is still in the learning phase, as Imran and Muhammad (2015) think that social networking sites constitute the virtual space that works on availability and development of various practices and activities, especially on the level of educational uses and their development, in addition to the social aspect of them. SM allows the participation of all parties in the learning system, and it is not limited to providing scientific knowledge content to learners, as these sites themselves work to provide learners with other skills such as communication and discussion and giving an opinion, while in traditional style is limited within the walls of schools due to the lack of time and its limitations for each lesson, with the crowding of the number of learners in one class (p. 116).

Amer (2015) showed the necessary set of elements for implementing DE and e-learning:

- Computers.
- The Internet and the intranet for the school.
- CDs.
- E-book and e-library.
- Electronic laboratories.
- Educators of technical resources. (P. 15)

Distance learning via the Internet can use one of the special platforms for learning or employing one of the readymade applications and sometimes even SM programs can be employed to create learning, and the current research has resorted to using groups within the social networking site Facebook to teach and learn learners within the research community. Imran and Muhammad (2009) showed that Facebook is one of the social networks that work to enable individuals to communicate with friends while exchanging information, and it was created in 2004 to exchange information and images between learners participating within it (pp. 139-140).

The study finds that it is possible to invest in social networking sites for learning, as Facebook is one of the most popular sites that attract all groups of society, especially the learnersgroup, and it is also possible to create a site for a group of learners dedicated to DE via the Internet without any financial cost and quite easy to subscribe. Where those educational/ instructional groups can be restricted to students only and specify the privacy of their group by not making it public. they are added by their names and accounts that are reliable and not fake, to prevent confusion with other users. it is noticed the possibility of receiving notifications directly from him or by linking the application to the email, and we find it supportive for video and live broadcast. Imran and Muhammad (2009) explained that it is expected that the most prominent uses of these social sites are in the educational field of learning, which is noticeable through the possibility of disseminating pictures and educational audio clips, pictorial, and the possibility

of exchanging and commenting on them and discussing their content, with the possibility of exchanging experiences between learners while allowing continuous use and with the continuation of communication among learners in that specialization (p. 140). Also, codified educational programs work to a great extent on forming necessary attitudes and skills for learners and their teachers alike, through the learner's obtaining of self-learning by himself or through a set of instructions that help improving learning (Shaheen, 2014, p. 97).

### Fourth axis Previous studies

# Table(1) of the Previous studies

| the study of (Nasraween&Fayzah, 2018)  |                                 |   |                       |  |  |  |  |
|--|---------------------------------|---|-----------------------|--|--|--|--|
| its aim  | Research<br>methodology         | Research<br>Sample                                      | Research              | Results  | Recommendations  |  |  |
|  | used                            | Sumple  | moutument             |  |  |  |  |
| Identify the degree<br>of use of social<br>networks in the<br>educational learning<br>process and its<br>obstacles                         | Descriptive                     | 200<br>teachers   | Two<br>questionnaires | There are statistically<br>significant<br>differences in the<br>degree of use of<br>communication sites<br>for the benefit of<br>females and those<br>who are proficient in<br>computers | Preparing<br>educational<br>seminars for<br>teachers explaining<br>the importance of<br>communication<br>networks in<br>education                          |  |  |
| A study (Hantoush: 20  | 017)                            | 1   | 1                     |  |  |  |  |
| its aim  | Research<br>methodology<br>used | Research<br>Sample                                      | Research instrument   | Results  | Recommendations  |  |  |
| Learn the effects of<br>new mental<br>visualization using<br>Facebook and<br>YouTube on<br>learning  | Descriptive                     | 25<br>teaching<br>staff<br>50<br>learners               | Questionnaire         | Social media has<br>benefits and can be<br>used in university<br>education   | Establishing<br>educational<br>programs on the<br>benefits of these<br>programs for the<br>field of education  |  |  |
| Study (Abdulaziz: 20)  | 14)                             |   |                       | -  |  |  |  |
| its aim  | Research<br>methodology<br>used | Research<br>Sample                                      | Research instrument   | Results  | Recommendations  |  |  |
| Learn the reality of<br>using social<br>networks in the<br>educational and<br>learning process in<br>universities of AL -<br>Saeed- Egypt. | Descriptive                     | 600<br>teaching<br>staff, 900<br>university<br>learners | Questionnaire         | The importance of<br>activating these sites<br>in many countries<br>with their low use by<br>teachers, noting the<br>students' desire to use<br>them more than the<br>teachers.          | Adopting a proposed<br>vision that activates<br>social media<br>networks for the<br>educational and<br>learning process<br>within universities<br>in Egypt |  |  |

### Similarities and differences between current research and previous studies:

1. The study tool: Previous studies have adopted the questionnaire as a tool for it. The current research has adopted the questionnaire in addition to the computerized lessons to be presented on the communication site for distance learning in a way that suits the purpose of the research.

2. Research Methodology: Previous studies have relied on the descriptive approach, and the current research has adopted the descriptive and experimental approach according to what serves the objectives of the current research.

3. Research samples: previous studies used one sample into two samples; one of them describes the opinions expressed by the learners and the other concerns what the teaching staff shows. In the current research, one sample was adopted for the learners according to the research objectives.

4. Results: Mostly it showed the importance of the role of social media in learning despite the presence of some obstacles, and this is what the research seeks to answer.

### **Beneficial aspects of the theoretical framework:**

1. Familiarity with the necessary aspects of working with the distance learning system via the Internet using one of the most popular communication programs among the target age group.

2. Identifying some of the experiences of countries globally and regionally and the extent to which the goals that those experiences were aimed at have been achieved and the possibility of adopting this learning via the Internet and benefiting from them.

3. Utilization of knowledge to form the two research tools, by organizing the scientific formulation of statements according to the frameworks that contribute to the distance learning process.

4. Learn how to prepare the computerized lesson used for distance learning via the Internet.

### The third topic:

### **Research methodology and procedures**

### First: Research methodology:

After reviewing the various research methodologies; It was found that the current research requires the adoption of the following:

1. The descriptive approach: Because the research requires obtaining the learners' point of view of the DE presented to them, the descriptive approach based on data collection and analysis has been used. Abdel Oader (2011) shows that the descriptive approach is the one that describes the characteristics of the phenomenon while collecting information about it without prejudice (pp. 58-59).

2. The experimental approach: After being informed of the circumstances of the computer study by the researcher, the experimental method was used to reduce the negatives associated with the lessons, where the experimental approach resorted to the urgent need for this. It is carried out by a person who encounters a problem within his field of work or from his personal life, with setting up a plan that seeks to solve those problems, as it is a research method based on problems directly facing the researcher (p. 32).

### Second: The research community and the sample

### **A- Research community:**

The research community is all the items of the studied phenomenon, whether these items are educational activities, books, or even people, or otherwise (Ghobari& Khaled, 2010, p. 95).

The community for the current research includes the (100) fourth-grade middle school students for the 2018-2019 academic year, distributed over three divisions, for whom education is provided electronically via the same website. **B-** Research sample:

The research sample includes fourth-grade middle school learners, with (40) learners as representatives of the research community, noting that (10) respondents have been excluded from the total community to prepare the exploratory study of the research tool to verify the validity and reliability of the tool.

Jaber and Kathem (1973) showed that three factors determine the most appropriate sample size, namely:

1. The nature of the original community.

- 2. Method for selecting the sample.
- 3. The degree of accuracy required. (P. 225)

The current sample is considered a random sample within the research community, Obeidat et al. (1998) believe that the sample that meets the objectives of the study must beconsidered (p. 116).

### Third: The two study tools:

The first tool for the research: To implement distance learning via the Internet, requires the preparation of a set of computerized lessons related to the learning objectives of teaching programming in the Visual Basic 6.0 language.

The second tool for the search: To extract the opinions of the research sample-respondents, about the role of distance e-learning, which the study aims to apply for them, it seems that it is appropriate to use the questionnaire as a research tool, Alvan, and Othman (2000) show as a means of collecting information using a questionnaire whose questions are put following the following steps:

1- Determine the subject of the study.

- 2- Formulating a group of questions without repeating them.
- 3- Test it, by presenting its statements to several arbitrators, as well as to several respondents- pilot survey.
- 4- Modifying the questionnaire, based on what was suggested in the aforementioned statements.
- 5- Presenting it to the respondents in the appropriate way. (Pp. 82-83)

Sultina and Gilani (2012) showed that to be able to know the trend and predict the behavior of the individual, we need to measure the opinions and impressions of community members, and by expressing reactions to the issue (p. 32).

### **A- Preparation of the two research tools:**

### The first research tool: computerized lessons:

Preparing the search tool in its initial form: the steps for preparing it were as follows:

1. Analyzing the Visual Basic programming chapter according to the objectives.

2. Divide the class into the required lessons according to the teaching plan.

3. Fixing the objectives for each of the Visual lessons.

4. Preparing lessons to be consistent with the goals and computerizing them.

5. Presenting it to several specialists before starting to present it to learners, to make the proposed amendments, if any.

### The second research tool: the questionnaire:

### **1.** The exploratory study:

To prepare two research tools that fit the study's requirements, the researcher did the following:

1) surveying some previous studies and literature to prepare the tool in its initial form.

2) Submitting an open survey questionnaire to several specialists in the educational field and the field of computer science to know their views.

3) Viewing the respondents' attitudes by using the observation card, which included questions:

A- Have you reviewed the online learning experiences of some foreign countries?

B- Is there any importance for you in adopting distance learning via the Internet to support learning to program in Visual Basic language?

C- What is your impression if this is applied to a subject in the secondary school study?

D- Which study materials in your perception do you need to invest in online learning?

This review aims to gain initial knowledge of the respondents' orientations regarding their acceptance of this type of learning.

### 2. Preparing the second search tool (the questionnaire) in its initial form:

Through the implementation of the initial survey step for preparing the questionnaire, the initial step for it was reached, and it was presented to a group of arbitrators, which consisted of ((37 statements). Then it underwent some modification according to the opinion of the group of arbitrators. The final form consisted of (36) statements after merging some statements and adding others.

3. The validity and reliability of the two research tools:

**3-1** Validate the two research tools:

### The first research tool: computerized lessons:

The apparent validity of the tool was obtained, which is done by obtaining the opinions of several specialists, and it has been presented to several specialists in the programming and educational field to be approved according to the majority of opinions approved the tool and the reliability was 95%.

### The second research tool, the questionnaire

To verify the validity of the tool, the researcher resorted to extracting the validity of it by presenting it to a group of specialized referees to see the validity of the statements of what they measure.

As Obaidat and others (1998) explained that the validity of the tool is calculated by presenting it to several experts specialized in the field in which the tool aims to measure. If the experts indicated that this tool measures what it was prepared to measure, then the researcher can rely on the experts'judgment (p. 164).

It obtained a percentage of 90.76% upon extracting the percentage of answers agreeing to its statements and for all of its axes.

### 2-3 The reliability of the research tool (the questionnaire):

To achieve the reliability of the tool (the questionnaire), the method of repetition was used in this research, by reintroducing the tool to an exploratory sample selected randomly from the research community and repeating the application within not less than two weeks.

Whereas, the application of the tool is done on a limited number of respondents from among the community members and it is repeated to them again, during a specific period, then calculate the answers for each statement and use the correlation coefficient between their answers for two consecutive times, and whenever it is found that the correlation square was high; The stability of the tool increased according to the opinion (Obaidat et al. 1998, p.159).

The reliability of each of its axes was obtained to become a 0.92 total of the instrument, using Alpha-Cronbach. The final version of the research tool is shown in Table (5).

### B- The application stage of the two research tools:

### **1.** Application of the first tool: the computerized lessons:

These lessons were applied and presented to the students according to the sequence of the study material determined for them in the study plan. These lessons were presented to them after the classroom explanation and broadcast to them through their group on Facebook in succession as video clips, each of which represents an independent post in which students can add their notes and comments in what is presented to them.

The details of the lessons for programming Visual Basic for the fourth preparatory period are explained as shown below:

### Table No. (2) the educational Visual Basic 6.0 lessons

| Lesson sequence | Lesson Topic   |
|-----------------|--|
| First           | Introduction to Visual Basic 6.0 programming and how to operate it in several  |
|                 | ways   |
| Second          | Stages of writing the project with an example of division (with - without) the |
|                 | remainder  |
| Third           | the phrase if Simple conditional   |
| The fourth      | the phrase if Compound conditional case 1                                      |
| The fifth team  | the phrase if Compound conditional case 2                                      |
| The sixth       | ring for Iterative   |
| The seventh     | Message box function msgbox  |
| The eighth team | Message box function inputbox  |
| The ninth       | A program to solve an example color ramp game                                  |

### 2. Application of the second tool: the questionnaire:

Within this stage, the tool is presented that has become ready and prepared to be applied to the sample members after testing its validity and reliability. and after completing the application of the first research tool completely.

The questionnaire was applied to 40 members of the community who constitute the representative sample of the research community, and the tool included the following categories (agree, to some extent, disagree) to three points Likert scale, and the values of the categories are (0, 1, 2).

### Fourth: statistical methods

Each of the statistical methods was used in this research to find all of the following:

Percentages to find out the extent of agreement of the arbitrators (validity) on the group of statements included within each axis of the research tool. Percentage = (No. of answers of the agreement  $\setminus$  No. of total answers) x 100 1. Alpha Cronbach, by which to verify the validity and reliability of the instrument.

2. The mean, which is extracted based on the reported occurrences of each statement for its knowledge.

Weighted mean = ((repeat of the first alternative x its weight) + (repeat of the second alternative x its weight) + (repeat of the third alternative x its weight)) / total number of individuals of the sample

3. Weight percentage and its formula was:Weight percentile = (weighted mean / maximum score) x 100

# The fourth topic:

### **Presentation and interpretation of results**

### 1. Sample results:

After applying the tool to the respondents (computerized lessons provided to them online via the Internet), their answers were identified, which were collected after applying the tool (the questionnaire). Extracted for each of them, and as shown in the following table:

| scope | Sequencing of | - I    | То     | disagree | Weighted | Weight     | Rank |
|-------|---------------|--------|--------|----------|----------|------------|------|
|       | the vertebrae | agree. | extent |          | mean     | percentage |      |
| Afi   | 1             | 26     | 12     | 2        | 1.6      | 80         | 6    |
| fec   | 2             | 19     | 15     | 6        | 1.325    | 66.25      | 10   |
| tive  | 3             | 32     | 6      | 2        | 1.75     | 87.5       | 3    |
| d     | 4             | 35     | 4      | 1        | 1.85     | 92.5       | 2    |
| om    | 5             | 14     | 18     | 8        | 1.15     | 57.5       | 13   |
| ain   | 6             | 15     | 21     | 4        | 1.275    | 63.75      | 12   |
| -     | 7             | 28     | 10     | 2        | 1.65     | 82.5       | 4    |

### Table No. (3) the results of the respondents' responses

| scope | Sequencing of                                       | - I         | То     | disagree | Weighted | Weight     | Rank |  |
|-------|---|-------------|--------|----------|----------|------------|------|--|
|       | the vertebrae                                       | agree.      | extent |          | mean     | percentage |      |  |
|       | 8   | 26          | 13     | 1        | 1.625    | 81.25      | 5    |  |
|       | 9   | 24          | 7      | 9        | 1.375    | 68.75      | 9    |  |
|       | 10  | 18          | 16     | 6        | 1.3      | 65         | 11   |  |
|       | 11  | 22          | 15     | 3        | 1.475    | 73.75      | 7    |  |
|       | 12  | 36          | 4      | 0        | 1.9      | 95         | 1    |  |
|       | 13  | 22          | 13     | 5        | 1.425    | 71.25      | 8    |  |
|       | General average weighted mean                       |             |        |          | 1.515    |            |      |  |
|       | General average weight percentage                   |             |        |          | 75.76    |            |      |  |
| Th    | 1   | 38          | 2      | 0        | 1.95     | 97.5       | 1    |  |
| e s   | 2   | 10          | 26     | 4        | 1.15     | 57.5       | 7    |  |
| kill  | 3   | 22          | 12     | 6        | 1.4      | 70         | 6    |  |
| l fi  | 4   | 30          | 8      | 2        | 1.7      | 85         | 2    |  |
| eld   | 5   | 23          | 14     | 3        | 1.5      | 75         | 4    |  |
|       | 6   | 30          | 8      | 2        | 1.7      | 85         | 2    |  |
|       | 7   | 27          | 11     | 2        | 1.625    | 81.25      | 3    |  |
|       | 8   | 23          | 11     | 6        | 1.425    | 71.25      | 5    |  |
|       | General average weighted mean                       |             |        |          | 1.556    |            |      |  |
|       | The general average weight percentage               |             |        |          | 77.81    |            |      |  |
| Co    | 1   | 26          | 10     | 4        | 1.55     | 77.5       | 5    |  |
| gni   | 2   | 30          | 9      | 1        | 1.725    | 86         | 1    |  |
| itiv  | 3   | 30          | 9      | 1        | 1.725    | 86         | 1    |  |
| e f   | 4   | 26          | 10     | 4        | 1.55     | 77.5       | 5    |  |
| eild  | 5   | 21          | 17     | 2        | 1.475    | 73.75      | 7    |  |
| -     | 6   | 24          | 14     | 2        | 1.55     | 77.5       | 5    |  |
|       | 7   | 29          | 11     | 0        | 1.725    | 86         | 1    |  |
|       | 8   | 27          | 10     | 3        | 1.6      | 80         | 4    |  |
|       | 9   | 28          | 12     | 0        | 1.7      | 85         | 2    |  |
|       | 10  | 28          | 10     | 2        | 1.65     | 82.5       | 3    |  |
|       | 11  | 24          | 13     | 3        | 1.525    | 76.25      | 6    |  |
|       | 12  | 23          | 12     | 5        | 1.45     | 72.5       | 8    |  |
|       | 13  | 21          | 11     | 8        | 1.325    | 66.25      | 9    |  |
|       | 14  | 24          | 14     | 2        | 1.55     | 77.5       | 5    |  |
|       | 15  | 26          | 12     | 2        | 1.6      | 80         | 4    |  |
|       | General average v                                   | weighted me | ean    |          | 1.58     |            |      |  |
|       | The general average weight percentage         78.95 |             |        |          |          |            |      |  |
|       |   |             |        |          |          |            |      |  |

The third axis, which is related to the cognitive field of learning, achieved the highest score in accomplishing its objectives after obtaining 78.95%, while the second axis, which included the field of the skill came in the second level after obtaining 77.81%, and the first axis, which included the emotional aspect, was ranked third according to its percentage which was 75.76%.

### **1.** Discussion of the results for the statements of each axis:

### Discussion of the results for the statements of the cognitive aspect:

Statements (2, 3, and 7) for this field were organized in the first order, through the agreement of the members of the research sample on their availability, as these statements obtained a percentage weight of 86, which shows that each of these mentioned statements was achieved at a very good level, which showed the mastery of the learners of distinguishing the functions of each program object in the toolbox with the ability to easily enumerate the component stages of the project, as well as the ability to distinguish between the two division processes (with-without) the rest. the researcher found that the accomplishment of these statements upon adopting distance learning via the Internet is considered a positive step in establishing simplified basic knowledge related to programming and its basics as it is the starting step for learning the rest of the programming issues related to this language. The finding

was in the same line with the study of Al-Arfajet al., (2012) when they showed that this allows the learner to move to the part that achieves his mastery of what he learns, indicating that learning in programming languages helps to mastercreativity and using them. It raises the level of self-confidence, innovation, and creativity of the learners (pp. 122-123).

In the second-order, statement (9) scored a percentage weight of 85, which shows that it has achieved a very good level from the point of view of the learners. This percentage shows that there is significant progress in employing programming tools and programming language objects and implementing its instructions in a way that prepares the transition to more complex projects and more accurate details within them while distinguishing the newest on the object.

In the third order, the statement (10) of this axis was due to it obtaining a percentage weight of 82.5, which indicates its achievement at a very good level from the viewpoint of the learners. The education provided for distance learners enhances how to deal with the conditional function, which in turn paves the way for learning to deal with complex conditional function cases as well.

The statements (8) and (15) participated in the fourth-order, each having a percentage weight of 80, meaning that it was achieved very well according to the views of the learners. The content of the two statements, respectively, was the possibility of implementing a project that works to change the colors of the objects when clicking on them after the implementation of the program, as well as the possibility of writing them for a program that specializes in the application of the input box function, and this stage is considered to be its transition to the software applications in its broadest and most precise form by explaining how to control the characteristics programmatically and through the attributes box and the attributes required to be set accompanying to achieve this of the tool. One of the most important steps in using functions of various possibilities, which enhances their knowledge in dealing with lines of code to form input boxes.

The statements (1), (4), (6), and (14) came in the fifth order, each of them having a percentage of 77.5, which indicates that each of them was at a good level among the learners. These statements included the possibility of describing the role of each part of the parts of the program after applying distance learning and enabling them to write the appropriate events for each object as well as applying a project to implement the four mathematical operations, with the application of the message box, so that the research finds that the ratio shows that the learners benefit well from the educational software used online in dealing with that knowledge for each topic.

### Discussion of the results for the statements of the skill domain axis:

In the first order, statement (1) scored the first rankand it had the percentage of 97.5, which indicates that it has been achieved excellently according to the opinions of the members of the research sample, which showed that learners find that this type of educational software can be run on most devices such as phones or computers of all kinds without the need for requirements or specific features for the devices used in their operating system, and this would facilitate dealing with the software, obtaining it and the flexibility to employ it for learning.

As for the second order, the statements (4) and (6) had a percentage of 85, which indicates that the verification rate was very good for them, and included the learner's ability to run the program (Visual Basic6) in more than one way, which is necessary to avoid delay in case they couldn't run it in the same way they were used to, while also being able to set dimensions and formatting for added objects using the properties box, whose properties vary according to the specific object.

In the third order, statement (7) had a percentage weight of 81.25, which indicates that it was achieved at a very good level according to the answers of the sample members.

Statement (5) came in the fourth rank, for obtaining the 75th percentile weight according to the responses of the research sample, which indicates that they can deal with the parts of the program interface (Visual Basic6) well.

In the fifth order, the statement (8) had a percentage weight of 71.25, which shows the possibility of students applying the steps of designing the program themselves after following the educational program well.

Statement (3), which has a percentage weight of 70, which is ranked sixth, shows the learners' can discover their weaknesses in the subject by presenting that material electronically, and in a (good) manner, by presenting that material electronically, which contributes to their avoidance of errors by self-diagnosing weaknesses to make a remedy for it.

As for the seventh and last ranking in this axis, the statement (2) had a percentage of 57.5, it was at an acceptable level, and this statement showed that learners can carry out a practical application to be able after following the lessons prepared electronically. The researcher considers that it is important to achieve this statement a higher percentage because this matter is one of the most important goals of distance learning in the subject of the research, and it is one of the most prominent requirements of dealing with (Visual Basic 6) and its practical application.

Discussion of the results for the statements of the affective domain axis:

In the first order, the statement (12) had a percentage of 95, which indicates its excellent achievement. This statement included enabling the learner to review his software information whenever he needed to, for its availability at all times. That he has achieved the justification for the adoption of electronic distance learning, and this is confirmed by Al-Hirsch et al (2012) that the introduction of modern educational methods in which the computer plays the main role will facilitate the learner's presentation of the educational material in a way that makes it easy for him to follow the material with or without the supervision of the teacher (p. 67).

In the second-order, statement (4) had a percentage of 92.5, which indicates its excellent achievement, which included the ability to repeat the lesson when necessary and at any time. This is confirmed by Afanehet al., (2013) when they showed that the opportunities for repetition, attempt, and experimentation many times work on the learner's mastery of the educational material while improving his achievement (p. 44)

In the third order, statement (3) had a percentage of 87.5, which indicates its achievement very well, and it shows that the learner can choose the most appropriate time for him without being restricted when adopting this type of learning, which is what asynchronous online learning seeks from the material is available at all times.

In the fourth-order, statement (7) had the percentage of 82.5, which shows that it has achieved very well, and which indicates the availability of sufficient information in the case that it is not possible to be in the traditional classroom for learning. The research finds that this eliminates the feeling of fear of losing the material in the case that it is not possible to attend at the time of the lessonthat was followed the traditional system, by introducing this type of education, allows the learner to access knowledge resources when needed.

In the fifth order, statement (8) had a percentage of 81.255, which indicates that it achieved very well. This statement included the adaptation of learners with it and considered it self-learning, and its verification with this percentage shows the achievement of self-learning upon its adoption, which is what the research finds from good things as it supported by Eyadat (2014) when he showed that individual learning is one of the main pillars of masterful learning, as not everyone learns at the same speed, so it takes into account individual differences in the learning styles and needs of the learners (p. 162).

In the sixth order, statement (1) had a percentage of 80, which shows that it has achieved very well, thus clarifying the learners'preference for this online learning style via the Internet and in its asynchronous form. Mubariz and Ahmad (2013), revealed that it is suitable for different age groups and educational levels and is compatible with the learners, giving them many advantages such as discussion and dialogue councils, saving them time (p. 17).

In the seventh order, the statement (11) came with a percentage of 73.75, which shows its good achievement, which included through it to show us that the learner finds a simple way of communicating information, and the research considers this one of the important matters through which individual differences between learners are minimized.

As for the eighth ranking, the statement (13) had a percentage of 71.25 and it shows its good achievement, and which showed that the sound effects added to the computerized lessons motivate them to love learning more.

Statement (9) came in the ninth position, with a percentage of 68.75, which indicates its average achievement among the sample members and included the ability of learners to discuss and clarify information within the distance learning group.

In the tenth rank, the statement (2) came with a percentage of 66.25, which shows an average achievement. This statement included considering distance learning via the Internet as a better provider of information.

Statement (10) was ranked eleventh for obtaining a percentage weight of 65 that it was achieved at an average level, which showed that the learner finds the e-learning software characterized by clarity.

And in the twelfth rank, the statement (6) had the percentage of 63.75, which shows its average achievement, which showed that the learner could train completely on distance learning without the need for the traditional system, the research finds that despite this statement's achievement As mentioned, however, it shows the learner's desire for traditional learning, which they are accustomed to, despite the existence and realization of their motivation to learn online via the Internet.

The last rank was for statement (5) which has a percentage of 57.5, which indicates its acceptable achievement. This percentage shows that it is achieved with the lowest percentage of learners and included that online learning stimulates learners to love learning more, and it is the lowest statement within this axis. It was found that the percentage of motivation they have for distance learning needs more support and incentives to attract them to this style.

### Finding

The research concluded that:

1. The research finds, according to the ratios achieved by the percentages and based on the sample opinions, that there is a significant role of distance learning via the Internet in learning programming for the language of Visual Basic, in its sixth edition of the fourth preparatory school students.

2. The fields are well achieved. It was noticed that the knowledge field is the most achieved using distance learning via the Internet.

### Recommendations

### First: Recommendations in light of the results

1. Adopting distance learning via the Internet more broadly in the rest of the computer subjects and for the rest of the classes.

2. The application of distance learning via the Internet in other study subjects for different stages.

3. The use of educational software to further discourage the learner from classroom presence.

4. Employing other applications in providing educational content so that lessons can be managed through it.

# Second: Recommendations related to the axes of the educational field

### **1.** Recommendations related to the first axis (the affective domain)

Pay attention to the following matters in order to develop the educational field

1) Diversifying the sound effects added to the lessons to draw the student more to the content of the educational programming in particular and distance learning via the Internet in general.

2) Encouraging students in carrying out scientific discussions aimed at improving the learning process and accepting their observations after each lesson.

3) Increasing the accuracy of the presentation of the educational software and clarifying its content in more detail.

4) Adding other motivational explanatory lessons, such as including competitions, to motivate them to learn and strive for excellence.

# 2. Recommendations related to the second axis (the skill field):

Pay attention to the following matters in order to develop skill

1) Designing suitable software that helps (the practical application) of this programming language and for its version (Vb6.0), as this version has become incompatible with some modern operating systems.

2) Allocating a post through which students present their skills in practical application to this programming language within the learning site they have used for each programming language topic (Vb6.0).

### 3. Recommendations related to the third axis (knowledge field):

Although it is the most investigated within this research, it is important to pay attention to these matters in order to develop and avoid the negative aspects observed during the research:

1) Adding additional exercises and examples for learners within the educational program and allocating additional software to it to develop their ability to deal with the (if function equation) in all its cases.

2) Clarify the events related to each of the objects of the language, with examples, and compare them with each other within an independent program devoted to events.

3) Preparing a special education software to be added to the series of these lessons and for the same class, working to clarify the mechanism of inserting functions and mathematical operations and how each of them works.

4) Preparing applications and additional examples related to loops in all cases of the counter used for them.

### The suggestions:

The current study suggests the following:

1) Preparing educational software to be used in distance learning via the Internet, on the subject of physical components, following the objectives of the curriculum.

2) Preparing metrics that show the extent to which goals are achieved when using educational software for each lesson.

3) Adopting distance learning via the Internet in acquiring skills, knowledge, and what the learner needs in the rest of the school subjects.

4) Employing social networking sites in learning because of their ease and advantages that are favorable to learners.

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### appendices.: Table No. (4) Names of the search arbitrators whose opinions were used to verify the validity of the tool and its preparation

| SN | Degree and name             | Specialization                 | place of work  |
|----|-----------------------------|--------------------------------|--|
| 1  | M.D. Ibtisam Hussein Fayyad | Curricula and teaching methods | University of Baghdad \ Ibn Al-<br>Haytham \ Department of |
|    |                             |                                | Computer   |
| 2  | M.D. Abdul Wahhab Sami      | Computer Science               | Al-Mustansiriya University /                               |
|    | Ibrahim                     |                                | College of Education / Computer                            |
|    |                             |                                | Department   |
| 3  | M.D. Farah Rafi Sharif      | Computer science               | Directorate of Institutional                               |
|    |                             |                                | Development and Governmental                               |
|    |                             |                                | Coordination \ Curriculum and                              |
|    |                             |                                | Examination Development                                    |
|    |                             |                                | Department   |
| 4  | M. Amna Salman Al-Birmani   | Curricula and teaching         | The Sunni Endowment /                                      |
|    |                             | methods                        | Curriculum and E-Learning                                  |
| 5  | M. Zahraa Al-Husseini       | Teaching methods               | Education \ Al-Karkh First \                               |
|    |                             |                                | Mansour High School for                                    |
|    |                             |                                | Excellence   |
| 6  | M. Zainab Hazem Ibrahim     | Curricula and teaching         | University of Baghdad \ Ibn Al-                            |
|    |                             | methods                        | Haytham College of Education \                             |
|    |                             |                                | Department of Computer Sciences                            |
| 7  | M. Linda Talib Amin         | Curricula and teaching         | University of Baghdad \ Ibn Al-                            |
|    |                             | methods                        | Haytham College of Education \                             |
|    |                             |                                | Department of Computer Sciences                            |
| 8  | M. MaysamRaad Yousef        | Curricula and teaching         | University of Baghdad \ Ibn Al-                            |
|    | -                           | methods                        | Haytham College of Education \                             |
|    |                             |                                | Department of Computer Sciences                            |

### Table No. (5)Finalized search tool

| SN   | The Statements of the survey   | Agreed. | Somewhat | disagree |  |  |  |  |
|------|--|---------|----------|----------|--|--|--|--|
| Affe | Affective Domain: After following up on the educational software over the Internet               |         |          |          |  |  |  |  |
| 1    | I prefer to pursue distance learning via the Internet and in its                                 |         |          |          |  |  |  |  |
|      | asynchronous form  |         |          |          |  |  |  |  |
| 2    | Online distance learning was considered to be a better information provider                      |         |          |          |  |  |  |  |
| 3    | I choose the time that works best for me and I am not constrained                                |         |          |          |  |  |  |  |
|      | by time when adopting this type of learning  |         |          |          |  |  |  |  |
| 4    | I can follow up and repeat the online lesson whenever it is                                      |         |          |          |  |  |  |  |
|      | deemed necessary and at any time   |         |          |          |  |  |  |  |
| 5    | Distance online learning motivates me to learn more than traditional learning                    |         |          |          |  |  |  |  |
| 6    | I train completely relying on it, without the need for the traditional system of learning        |         |          |          |  |  |  |  |
| 7    | It provides me with enough information in case I am unable to be<br>in the traditional classroom |         |          |          |  |  |  |  |
| 8    | I adapt to it and consider it self-learning  |         |          |          |  |  |  |  |
| 9    | I discuss and clarify information about the subject within the learning group                    |         |          |          |  |  |  |  |

| SN    | The Statements of the survey  | Agreed. | Somewhat | disagree |
|-------|---|---------|----------|----------|
| 10    | I find e-learning software very clear.                                |         |          |          |
| 11    | I find the way to communicate information simplified                  |         |          |          |
| 12    | I can review my programming information as often as needed, as        |         |          |          |
|       | it is available at all times  |         |          |          |
| 13    | The added sound effects to the computerized lessons motivate me       |         |          |          |
|       | to love learning even more  |         |          |          |
| Skill | s: After following up on the educational software online,             |         |          |          |
| 1     | I can run the application and the e-lessons on all types of mobile    |         |          |          |
|       | devices and computers   |         |          |          |
| 2     | The practical application was carried out expertly, after following   |         |          |          |
|       | the electronically prepared lessons                                   |         |          |          |
| 3     | I discover my weaknesses regarding presenting the material            |         |          |          |
|       | electronically  |         |          |          |
| 4     | I run Visual Basic 6.0 in several ways                                |         |          |          |
| 5     | I can deal with parts of the program interface for Visual Basic 6     |         |          |          |
| 6     | I can set the dimensions and perform the added object formats via     |         |          |          |
| _     | the properties box  |         |          |          |
| 7     | I can programmatically by changing the object's properties            |         |          |          |
| ð     | I can design a project similar to the computerized lesson             |         |          |          |
| C1-21 | presented within e-learning   |         |          |          |
|       | s: After following up on the educational software online,             |         |          |          |
| 1     | the online distance learning  |         |          |          |
| 2     | L recognize the functionality of each programming object in the       |         |          |          |
| -     | object Box  |         |          |          |
| 3     | I prepare the steps of the project easily                             |         |          |          |
| 4     | I write the "Events" appropriately for each object                    |         |          |          |
| 5     | I apply a simplified project to implement specific "events" on        |         |          |          |
|       | specific organisms with required instructions                         |         |          |          |
| 6     | I implemented a project to apply the four basic mathematical          |         |          |          |
|       | operations  |         |          |          |
| 7     | I programmatically distinguish between the instructions for           |         |          |          |
|       | division without/with the remainder                                   |         |          |          |
| 8     | I apply a project to change the color of several objects when         |         |          |          |
|       | clicking on those same objects after performing.                      |         |          |          |
| 9     | I implement a project to change the colors of command keys            |         |          |          |
|       | when performing an "event" on them                                    |         |          |          |
| 10    | I write a program that includes the simple If conditional             |         |          |          |
| 1.1   | Instruction   |         |          |          |
| 11    | I write a program that includes the conditional instruction If in its |         |          |          |
| 10    | compound state  |         |          |          |
| 12    | I write a program that finds the square of a number                   |         |          |          |
| 13    | I write a program that implements the instruction of the loop         |         |          |          |
| 14    | I write a program to implement the input her function                 |         |          |          |
| 15    | I write a program to implement the input box function                 |         |          |          |