**Attachment (1)**

**Names of the experts in the fields of curricula and teaching methods who were asked for their comments in designing the infographics (fixed / mobile), the cognitive achievement test, the test of some applied skills and the attitude scale**

|  |  |  |
| --- | --- | --- |
| **S.** | **Name** | **Job** |
| **1** | Prof. Abeer Moawad Abdullah | Professor of Curricula and Head of the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **2** | Prof. Ashraf Sobhy Younes | Professor of Curricula at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **3** | Prof. Fatma Awad Saber | Professor of Teaching Methods at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **4** | Prof. Hany Mahmoud Abu-Bakr | Professor of Sports Psychology at the Department of Physical Education Foundations - Faculty of Physical Education for Boys - Alexandria University |
| **5** | Prof. Heba Abdel-Azeem Embaby | Curriculum professor at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **6** | Prof. Mervat Aly Khafaga | Professor of Teaching Methods, Faculty of Physical Education for Boys - Alexandria University |
| **7** | Prof. Mohamed Abdel-Wahab Attiya | Professor of Teaching Methods at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **8** | Prof. Mohamed Fawzy Waly | Professor of Educational Technology at the Department of Educational Technology - Faculty of Education - Damanhour University - Dean of the Faculty of Computers and Information - Damanhour University |
| **9** | Prof. Mohamed Mohamed El-Hamamy | Professor of Sports Recreation at the Department of Sports Recreation - Faculty of Physical Education in El Haram - Helwan University |
| **10** | Assist. Prof. Mohamed Waheed Mohamed Soliman | Assistant Professor at the Department of Educational Technology - Faculty of Specific Education - Alexandria University |
| **11** | Prof. Mona Mohamed Sokkar | Professor of Education and Training Technology at the Faculty of Physical Education for Boys - Alexandria University |
| **12** | Prof. Taha Sobhy Taha | Professor of Teaching Methods at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |
| **13** | Prof. Zakiya Ibrahim Kamel | Professor of Teaching Methods at the Department of Curricula and Teaching Methods of Physical Education and Sports - Faculty of Physical Education for Boys - Alexandria University |

**\*Note: The experts are arranged alphabetically**

**Attachment (2)**

**Blueprint specification table for the cognitive achievement test for the academic year 2021-2022**

**Grade / First Grade, Second Semester Total Score / 70 points**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **The topic** | **The total teaching hours** | **The relative importance of the topic (weight)** | **Total score of the topic** | **Total number of questions of the topic** | **Memory and comprehension level** | **Application level** | **Higher mental levels** | **Total number of MCQs** | **Total number of production questions (essay)** |
| **History of the Scout Movement, its founder, and scouting traditions** | **1** | **8.33%** | **4** | **4** | **4** |  |  | **4** | **-** |
| **The foundations and principles of scouting education** | **2** | **16.66%** | **6** | **6** | **4** |  |  | **6** | **-** |
| **Scouting program** | **2** | **16.66%** | **6** | **6** | **4** | **2** |  | **6** | **-** |
| **Scouting unit and its management** | **2** | **16.66%** | **6** | **6** |  | **2** | **2** | **6** | **-** |
| **Scouting curriculum** | **1** | **8.33%** | **4** | **4** | **4** | **2** |  | **4** | **-** |
| **The basics of camping in the outdoors** | **2** | **16.66%** | **8** | **8** | **5** | **3** |  | **8** | **-** |
| **Land navigation** | **2** | **16.66%** | **6** | **6** | **2** | **2** |  | **6** | **-** |
| **Ropes and codes and evenings** | **2** | **16.66%** | **6** | **6** | **4** | **2** | **2** | **6** | **-** |
| **Total** | **14** | **100%** | **50 points** | **50 questions** | **27** | **12** | **4** | **50 questions** | **-** |

**Instructions:**

* The levels of remembering and comprehension, the applied level, and the higher mental levels refer to analysis, synthesis, and evaluation. (according to Bloom’s taxonomy)
* The levels in each topic are chosen according to the targeted educational outcomes (Institutional Learning Outcomes “ILOs”).
* The question type is chosen according to the nature of the course
* When determining the total number of exam questions, the time of each question must be considered according to the type and the level of the question
* The relative importance of the topic = the number of teaching hours for each topic / the total number of the course
* The sum of the question scores for each topic from the total score = the relative importance of the topic x exam scores
* The number of questions for each topic = the relative importance of the topic x the total number of the exam questions
* The relative importance of each cognitive level = the total number of educational outcomes for the cognitive level / the total number of educational outcomes of the course.
* The number of questions at each cognitive level of the topic = the relative importance of the topic x the relative importance of each cognitive level x the total number of exam questions.

**Attachment (3)**

**Survey form for the experts’ comments on the cognitive achievement test for the students of the “scouting education and its applications” course**

Dear Prof. Dr. / …………………………………………………………….

**After Greetings,**

The researcher is conducting a study under the title: “The Effect of Educational Infographics (Fixed / Mobile) Using (QR Code) Technology in Mobile Learning Environment on the Outcomes of the “Scouting Education and Its Applications” course, and wonders if you would kindly give your comment on the students’ cognitive achievement test in the scouting education and its applications course, by placing the mark (✓) in front of each axis and each statement (convenient or inconvenient). The exam included (MCQ and right/wrong questions).

**The topics of the cognitive achievement test are:**

* Founder and history of the Scout Movement.
* The concept, objectives and elements of the Scout Movement.
* The promise and the law - teaching by practicing - the badge system - the community system - outdoor life.
* Scouting program.
* Scouting fields and methods.
* Scouting skills.
* Scouting applications.

This sure will contribute effectively to enriching this research

Yours sincerely,

**The Researcher**

**I) Multiple-choice questions: (25 points)**

**Choose only one answer for each of the following activities:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.** | **Statements** | **Convenient** | **Inconvenient** |
| **1** | An educational movement with a voluntary, non-political feature directed at juniors and youths and open to all without discrimination in origin or genderA) The scouting program B) The scouting unitC) The Scout Movement D) The marine scout |  |  |
| **2** | It is a commitment to a covenant that the scout takes upon himself without honor or compulsion to perform his duties towards God, others and selfA) The Law B) The PromiseC) Scouting D) Scouting traditions |  |  |
| **3** | A system in which students are divided into teams with specific responsibilities and tasksA) The group system B) The outdoor lifeC) The badge system D) The scout team |  |  |
| **4** | A widespread movement whose members belong to different cultures, religions and ethnicities, and scouts from different countries meet every four years in an international festivalA) The Egyptian Scout Movement B) The Arab Scout MovementC) The English Scout Movement D) The International Scout Movement |  |  |
| **5** | Robert Stephenson Smyth Baden-Powell was born inA) 1860 B) 1806 C) 1880 D) 1866 |  |  |
| **6** | They are the marks that the movement member obtains by passing specific skillsA) Hobby and service badges B) Decoration badgesC) Proficiency badges D) Merit badges |  |  |
| **7** | These are the marks that a movement member obtains based on his Scout rankA) Hobby and service badges B) Decoration badgesC) Merit badges D) Proficiency badges |  |  |
| **8** | They are the marks that are awarded due to distinction, attending events, or as souvenirs for scouting occasions, and they are often metallicA) Wooden badge B) DecorationsC) Merit badges D) Badges of scouting traditions |  |  |
| **9** | One of the elements and principles of the Scout Movement in which scouts acquire individual and collective information and skills through progressive training according to their abilities and tendencies.A) The promise and the law B) Teaching by practicingC) The badge system D) The group system |  |  |
| **10** | Activities consistent with the scouts’ age characteristics in the physical, mental, social and spiritual fieldsA) Excellence badges B) Proficiency badgesC) Hobby badges D) Public service badges |  |  |
| **11** | Diverse fields so that each scout finds what he likes of activities in proportion to his capabilities, abilities, faculties and featuresA) Public service badges B) Competence badgesC) Hobby badges D) Decoration badges |  |  |
| **12** | The cornerstone of the individual’s integration into social life, in which individuals feel their independence and freedom in dialogue and workA) Outdoor life B) The groups systemC) The badge system D) The individuals system |  |  |
| **13** | A system that develops the various personal abilities of the scouts religiously, physically and mentally, including religious duties and sports activities, in addition to developing the senses and accuracy of observation.A) Outdoor life B) The badge systemC) The promise and the law D) The groups system |  |  |
| **14** | Scouts and advanced scouts teams are divided into vanguards, each consisting of 6-8 scouts, so that the total number of scouts isA) 12-30 B) 16-32 C) 16-35 D) 8-28 |  |  |
| **15** | The rovers clan is divided into groups, each of which consists of 4 to 8 rovers, so that the total number of rovers isA) 12-42 rovers B) 8-36 rovers C) 8-32 rovers D) 12-36 rovers |  |  |
| **16** | The leader’s role for the individuals in the advanced scout stageA) Father B) Leader C) Friend D) Brother |  |  |
| **17** | The leader’s role for the individuals in the rover stageA) Father B) Friend C) Brother D) Leader |  |  |
| **18** | The group leader of the rovers team is calledA) Senior major B) Sergeant C) First sergeant D) Senior leader |  |  |
| **19** | A type of fire that gives high calories and is used in cooking large quantities of foodA) Square fire B) Astral fire C) Reflected fire D) Hunter’s fire |  |  |
| **20** | A type of fire that is used to dry clothes inside the campA) Hunter’s fire B) Astral fire C) Reflected fire D) Pyramidal fire |  |  |
| **21** | A type of fire that is used in cooking for more than one pot at a timeA) Square fire B) Astral fire C) Reflected fire D) Hunter’s fire  |  |  |
| **22** | A type of axe that is used while putting out fires or breaking down walls and objectsA) Common axe B) Fire axe C) Pointed axe D) American axe |  |  |
| **23** | A type of axe that is used while moving and roaming within the forests and cutting branchesA) Common axe B) Fire axe C) Drop axe D) American axe  |  |  |
| **24** | A type of fire that is used in campfiresA) Hunter’s fire B) Astral fire C) Pit fire D) Pyramidal fire |  |  |
| **25** | Before using the axe in the pieces, make sure that it is usable andA) Pointed B) Its parts are concreteC) Light in weight D) Kept in the case |  |  |

**The second question:**

**II) Right/Wrong questions: (25 points)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.** | **Items** | **Convenient** | **Inconvenient** |
| **1** | Founder of the Scout Movement Robert Stephenson Smyth Baden-Powell. ( ) |  |  |
| **2** | The Scout Movement began in Egypt in (1814). ( ) |  |  |
| **3** | The Egyptian scouts were registered within the World Scout Organization in 1929. ( ) |  |  |
| **4** | The Scout uniform for the members of the World Scout Movement does not differ from country to another and has one feature. ( ) |  |  |
| **5** | One of the basics of creating the scouting curricula is to display the gradation system and progress in merit badges in an attractive manner. ( ) |  |  |
| **6** | The axe is delivered to the colleague by the blade and not by the hand. ( ) |  |  |
| **7** | One of the general conditions of the scouting program is to conflict with the desires and needs of juniors and youths. ( ) |  |  |
| **8** | One of the specifications of the tents is that they should be made of a durable water-repellent fabric. ( ) |  |  |
| **9** | One of the characteristics of the Scout Program is that it is not repetitive. ( ) |  |  |
| **10** | Robert Stephenson Smyth Baden-Powell was born in 1806. ( ) |  |  |
| **11** | The scout salute is one of the scouting traditions that is practiced by the cubs only in the scout camp. ( ) |  |  |
| **12** | One of the basics of creating scouting curricula is that it is characterized by stability and rigidity in its implementation. ( ) |  |  |
| **13** | The Arab scout associations have scouts in several stages of modification, the most prominent of which is the dispensation of short pants, and their replacement with long ones. ( ) |  |  |
| **14** | One of the general conditions of the Scout Program is that it is characterized by stagnation and reliance on old traditional methods. ( ) |  |  |
| **15** | One of the characteristics of the Scout Program is that it has no competition. ( ) |  |  |
| **16** | The group’s name of the cubs’ team is called the hexagons. ( ) |  |  |
| **17** | One of the characteristics of the Scout Program is that it is balanced in all scouting topics. ( ) |  |  |
| **18** | The first Egyptian Scout Association was established in (1902). ( ) |  |  |
| **19** | The Egyptian Scouts were registered with the Arab Scout Organization in 1954. ( ) |  |  |
| **20** | The Egyptian Scouts were registered with the World Scout Organization in 1922. ( ) |  |  |
| **21** | When choosing a camping location in a scout camp, the ground must be free of thorns, cracks, puddles, and swamps. ( ) |  |  |
| **22** | One of the characteristics of the Scout Program is that it is closed to itself and is not renewed. ( ) |  |  |
| **23** | When choosing a camping location in a scout camp, the ground must be wet or rocky. ( ) |  |  |
| **24** | The star fire is used for heating at night during guarding. ( ) |  |  |
| **25** | The scout salute with three fingers reminds him of his promise, which includes three main points: to do the duty towards God, towards others, and towards people. ( ) |  |  |

**Put (✓) mark in front of the correct statements and (×) mark in front of the incorrect statements**

**Answer key of the cognitive achievement test**

|  |  |  |  |
| --- | --- | --- | --- |
| **Statement number** | **Answer number** | **Statement number** | **Answer number** |
| **1** | **C** | **1** | **✓** |
| **2** | **B** | **2** | **×** |
| **3** | **A** | **3** | **✓** |
| **4** | **D** | **4** | **×** |
| **5** | **A** | **5** | **✓** |
| **6** | **A** | **6** | **×** |
| **7** | **D** | **7** | **×** |
| **8** | **B** | **8** | **✓** |
| **9** | **C** | **9** | **✓** |
| **10** | **B** | **10** | **×** |
| **11** | **C** | **11** | **×** |
| **12** | **B** | **12** | **×** |
| **13** | **A** | **13** | **✓** |
| **14** | **B** | **14** | **×** |
| **15** | **C** | **15** | **×** |
| **16** | **C** | **16** | **√** |
| **17** | **C** | **17** | **✓** |
| **18** | **A** | **18** | **×** |
| **19** | **A** | **19** | **✓** |
| **20** | **C** | **20** | **✓** |
| **21** | **A** | **21** | **✓** |
| **22** | **B** | **22** | **×** |
| **23** | **D** | **23** | **×** |
| **24** | **D** | **24** | **✓** |
| **25** | **B** | **25** | **×** |

**Attachment (4)**

**Survey form for the experts’ comments on the applied skills test for the students of the “scouting education and its applications” course**

Dear Prof. Dr. / …………………………………………………………….

**After Greetings,**

The researcher is conducting a study under the title: “The Effect of Educational Infographics (Fixed / Mobile) Using (QR Code) Technology in Mobile Learning Environment on the Outcomes of the “Scouting Education and Its Applications” course, and wonders if you would kindly give your comment by specifying the appropriate evaluation items to measure the students’ applied skills of the “scouting education and its applications” course, by placing a (✓) mark in front of each statement and under the statement to decide whether it is (convenient or inconvenient).

This sure will contribute effectively to enriching this research

Yours sincerely,

**The Researcher**

**Attachment (4)**

**An observation card for the applied skills for the “scouting education and its applications” course**

**Evaluation items and point distribution**

**Student’s name: Section number: Seating number:**

|  |  |  |
| --- | --- | --- |
| **S.** | **Evaluation items** | **Standard score** |
| **10 points** |
|  | **Mastery of (3) practical skills × 10 points** |
| **1** | **Performing the scout salute and explaining the meaning of the scout salute and uttering the text of the promise and the law.** |  |
| **2** | **Wearing the scout uniform (scout shirt – bandana tie – locating the badges on the right and left side).** |  |
| **3** | **Determining the circle of safety before using the axe, making sure that the axe is usable before using it in chopping and slicing, and determining the angles of chopping or slicing, maintaining the axe and preserve it.** |  |
| **4** | **Determining the circle of safety before lighting the fire, creating and lighting the pyramidal fire in the least possible time and specifying its uses.** |  |
| **5** | **Determining the circle of safety before lighting the fire, creating and lighting the astral fire in the least possible time and specifying its uses.** |  |
| **6** | **Determining the circle of safety before lighting the fire, creating and lighting the square fire in the least possible time and specifying its uses.** |  |
| **7** | **Determining the circle of safety before igniting the fire, creating and lighting the reflected fire in the least possible time and specifying its uses.** |  |
| **8** | **Determining the circle of safety before lighting the fire, creating and lighting the hunter’s fire in the least possible time and specifying its uses.** |  |
| **9** | **Determining the circle of safety before lighting the fire, creating and lighting the pit fire in the least possible time and specifying its uses.** |  |
| **10** | **Determining the direction of the north using the compass.** |  |
| **11** | **Uses of ropes outdoor (knot – tie – round) and distinguish the good and bad ropes.** |  |
| **12** | **Making a simple knot (the simple web), the horizontal knot (the front), and the octet knot.** |  |
| **13** | **Making the connection knot and the double knot.** |  |
| **14** | **Making the fisherman knot and the noose knot.** |  |
| **15** | **Making the sphenoid tie and the lumberjack tie.** |  |
| **16** | **Making the hook tie - and the climbing tie (cowboy).** |  |
| **17** | **Making the square cycle – diamond cycle – scissor cycle.** |  |
| **Total** | **30 points** |

**Attachment (5)**

**Survey form for the experts’ comments on the attitude scale for the students towards the educational infographics (fixed / mobile) using (QR code) technology when teaching the “scouting education and its applications” course**

Dear Prof. Dr. / …………………………………………………………….

**After Greetings,**

The researcher is conducting a study under the title: “The Effect of Educational Infographics (Fixed / Mobile) Using (QR Code) Technology in Mobile Learning Environment on the Outcomes of the “Scouting Education and Its Applications” course, and wonders if you would kindly give your comment by specifying the appropriate statements to measure the students’ attitudes towards the use of the educational infographics (fixed / mobile) using (QR code) technology in the “scouting education and its applications” course, by placing a (✓) mark in front of each statement and under the statement to decide whether it is (convenient or inconvenient).

This sure will contribute effectively to enriching this research

Yours sincerely,

**The Researcher**

**A survey of experts’ opinions on the appropriate statements to measure students’ attitudes towards the use of educational infographics (fixed / mobile) using (QR code) technology in the scouting education and its applications**

| **S.** | **Scale statements** | **Convenient** |  **Inconvenient** |
| --- | --- | --- | --- |
| **1** | Educational technology significantly contributes to the development of the physical education field. |  |  |
| **2** | The blended education based on e-learning and live learning encourages teaching/learning fruitfully. |  |  |
| **3** | The best learning of the applied aspects of the scouting education course using the fixed infographics. |  |  |
| **4** | The educational infographics (fixed / mobile) with the QR code technology provides a fruitful environment for acquiring the learning outcomes of the “scouting education and its applications” course. |  |  |
| **5** | The educational infographics (fixed / mobile) with the QR code technology provides multiple sources of learning in the “scouting education and its applications” course. |  |  |
| **6** | I feel excited when I learn using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **7** | I’m ashamed of myself when I can’t learn with an educational infographics model (fixed / mobile) with the QR code technology. |  |  |
| **8** | I am happy when I learn using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **9** | I make sure to learn using the educational infographics (fixed / mobile) with the QR code technology as long as it is available. |  |  |
| **10** | I find that teaching using educational infographics (fixed / mobile) with the QR code technology is a waste of time. | Reverse |  |
| **11** | I hope to be familiar with all the information about the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **12** | I think teaching with educational infographics (fixed / mobile) with the QR code technology is tiring and stressful. | Reverse |  |
| **13** | Teaching using the educational infographics (fixed / mobile) with the QR code technology contributes to solving many of the problems that traditional education suffers from. |  |  |
| **14** | I would like to use the educational infographics (fixed / mobile) with the QR code technology in all stages of acquiring the teaching skills. |  |  |
| **15** | I feel isolated if I use the educational infographics (fixed / mobile) with the QR code technology in education. | Reverse |  |
| **16** | I hope to have the opportunity to participate in any educational programs using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **17** | I’m looking forward to reading anything other than learning using the educational infographics (fixed / mobile) with the QR code technology. | Reverse |  |
| **18** | I avoid participating with my colleagues in educational activities that in which we have to use the educational infographics (fixed / mobile) with the QR code technology. | Reverse |  |
| **19** | I would like to continue my studies of other topics using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **20** | I hope that the physical education courses contain educational lessons using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **21** | Teaching using the educational infographics (fixed / mobile) with the QR code technology makes me more free to self-learn. |  |  |
| **22** | I feel that my morale improves whenever I participate in important educational experiences using the educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **23** | Teaching using the educational infographics (fixed / mobile) with the QR code technology helps me increase health awareness. |  |  |
| **24** | I want to teach using educational infographics (fixed / mobile) with the QR code technology to learn new lessons. |  |  |
| **25** | Teaching using the educational infographics (fixed / mobile) with the QR code technology helps me understand the applications of educational technology. |  |  |
| **26** | I am discussing with my colleagues about how to teach / learn educational infographics (fixed / mobile) with the QR code technology. |  |  |
| **27** | I appreciate the teacher who uses modern technology methods, including electronic flipped learning. |  |  |
| **28** | Electronic flipped learning flipped learning model provides real learning knowledge, information, skills and experiences. |  |  |
| **29** | I avoid participating in any electronic flipped learning training courses | Reverse |  |
| **30** | The flipped learning model considers the transfer of learning experiences to the learners before meeting the teacher with the lesson. |  |  |
| **31** | Learning using electronic flipped learning helps me acquire positive emotional directives. |  |  |
| **32** | Learning using electronic flipped learning helps me acquire mental habits in the practical aspects of the “aquatic sports teaching methods” course. |  |  |
| **33** | Using the electronic flipped learning pushes me to make more effort in acquiring teaching performance in general and in the “aquatic sports teaching methods” course in particular. |  |  |
| **34** | Electronic flipped learning develops positive tendencies and desires towards learning. |  |  |
| **35** | Electronic flipped learning gives me positive behavioral attitudes towards learning. |  |  |
| **36** | Electronic flipped learning gives me a commitment to professional ethics in word and deed. |  |  |
| **37** | Electronic flipped learning gives me mutual respect between learners and the teacher in all learning situations appropriately. |  |  |

**Attachment (6)**

**Table (8) Cronbach’s Alphaa total attitude scale coefficient n=12**

|  |  |  |  |
| --- | --- | --- | --- |
| **N** | **Ferry number** | **Cronbach’s Alpha if Item Deleted** | **Cronbach’s Alphaa** |
| **1** | **1** | **0.611** | **0.715** |
| **2** | **2** | **0.332** |
| **3** | **3** | **0.569** |
| **4** | **4** | **0.442** |
| **5** | **5** | **0.664** |
| **6** | **6** | **0.877** |
| **7** | **7** | **0.328** |
| **8** | **8** | **0.642** |
| **9** | **9** | **1.024** |
| **10** | **10** | **0.835** |
| **11** | **11** | **0.429** |
| **12** | **12** | **0.677** |
| **13** | **13** | **0.848** |
| **14** | **14** | **0.638** |
| **15** | **15** | **0.328** |
| **16** | **16** | **0.972** |
| **17** | **17** | **0.539** |
| **18** | **18** | **0.431** |
| **19** | **19** | **1.237** |
| **20** | **20** | **0.750** |
| **21** | **21** | **0.517** |
| **22** | **22** | **0.908** |
| **23** | **23** | **1.141** |
| **24** | **24** | **0.828** |
| **25** | **25** | **1.166** |
| **26** | **26** | **0.838** |
| **27** | **27** | **0.588** |
| **28** | **28** | **0.298** |
| **29** | **29** | **1.353** |
| **30** | **30** | **0.625** |
| **31** | **31** | **1.116** |
| **32** | **32** | **1.437** |
| **33** | **33** | **0.425** |
| **34** | **34** | **0.679** |
| **35** | **35** | **1.005** |
| **36** | **36** | **0.588** |
| **37** | **37** | **0.372** |

The Cronbach’s Alphaa total attitude scale table shows that the value of the Cronbach’s Alphaa coefficient was 0.715 and this value is greater than 0.70, indicating the reliability of the scale.

**Attachment (7)**

**Table (9) Finding the ease and difficulty labs for Cognitive achievement n =12**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **N** | **Ease labs** | **Difficulty labs** | **N** | **Ease****labs** | **Difficulty labs** |
| **1** | **1.00** | **0.00** | **26** | **0.17** | **0.83** |
| **2** | **0.42** | **0.58** | **27** | **0.25** | **0.75** |
| **3** | **0.42** | **0.58** | **28** | **0.58** | **0.42** |
| **4** | **0.58** | **0.42** | **29** | **0.67** | **0.33** |
| **5** | **0.58** | **0.42** | **30** | **0.50** | **0.50** |
| **6** | **0.58** | **0.42** | **31** | **0.58** | **0.42** |
| **7** | **0.42** | **0.58** | **32** | **0.67** | **0.33** |
| **8** | **0.50** | **0.50** | **33** | **0.58** | **0.42** |
| **9** | **0.75** | **0.25** | **34** | **0.50** | **0.50** |
| **10** | **0.58** | **0.42** | **35** | **0.58** | **0.42** |
| **11** | **0.58** | **0.42** | **36** | **0.75** | **0.25** |
| **12** | **0.67** | **0.33** | **37** | **0.83** | **0.17** |
| **13** | **0.42** | **0.58** | **38** | **0.58** | **0.42** |
| **14** | **0.58** | **0.42** | **39** | **0.50** | **0.50** |
| **15** | **0.75** | **0.25** | **40** | **0.67** | **0.33** |
| **16** | **0.58** | **0.42** | **41** | **0.58** | **0.42** |
| **17** | **0.33** | **0.67** | **42** | **0.67** | **0.33** |
| **18** | **0.83** | **0.17** | **43** | **0.58** | **0.42** |
| **19** | **0.67** | **0.33** | **44** | **0.50** | **0.50** |
| **20** | **0.67** | **0.33** | **45** | **0.58** | **0.42** |
| **21** | **0.67** | **0.33** | **46** | **0.75** | **0.25** |
| **22** | **0.58** | **0.42** | **47** | **0.83** | **0.17** |
| **23** | **0.58** | **0.42** | **48** | **0.58** | **0.42** |
| **24** | **0.33** | **0.67** | **49** | **0.50** | **0.50** |
| **25** | **0.25** | **0.75** | **50** | **0.67** | **0.33** |

It is clear from table no (9) for finding the ease and difficulty labs for Cognitive achievement that the ease labs ranges from (0.25 - 1.00(The difficulty labs ranges from (0.00-0.75) and these values are acceptable for the ability of cognitive testing to distinguish between students as well as for different levels of students.

**Attachment (8)**

**Experts’ comments form on evaluating the educational infographics design (fixed / mobile) on the electronic educational platform**

**I) Educational material:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.** | **Educational axes** | **Sufficient** | **Insufficient** | **Suggested modification** |
| **1** | **General and behavioral objectives of the course** |  |  |  |
| **2** | **Theoretical content of the course** |  |  |  |
| **3** | **Practical content of the course** |  |  |  |
| **4** | **Illustrations** |  |  |  |
| **5** | **Educational videos** |  |  |  |
| **6** | **Electronic test (cognitive achievement - attitude scale)** |  |  |  |
| **7** | **Educational platform on Microsoft Teams** |  |  |  |
| **8** | **Youtube channel** |  |  |  |
| **9** | **Tools to communicate with the researcher** |  |  |  |

**II) Educational media:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.** | **Educational media axes** | **Sufficient** | **Insufficient** | **Suggested modification** |
| **1** | **Photographs and fixed photos** |  |  |  |
| **2** | **Educational videos** |  |  |  |
| **3** | **Instructions associated with the content** |  |  |  |
| **4** | **Youtube channel** |  |  |  |
| **5** | **Educational platform on Microsoft Teams** |  |  |  |
| **6** | **Icons to communicate with the researcher** |  |  |  |

**III) Designing the educational platform:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.** | **Designing the e-learning platform axes** | **Sufficient** | **Insufficient** | **Suggested modification** |
| **1** | **Control the educational platform** |  |  |  |
| **2** | **Browse the educational content of the platform for the theoretical and practical aspects using (QR code)** |  |  |  |
| **3** | **Design colors of the electronic educational platform** |  |  |  |
| **4** | **The size and type of font used within the platform** |  |  |  |
| **5** | **The audio-visual aspect of the educational platform (videos)** |  |  |  |
| **6** | **The pictures are clear** |  |  |  |
| **7** | **General design of the educational platform** |  |  |  |