The impact of an educational software using mobile phone on the performance level of some offensive skills in handball for faculty of physical education girl students mansoura university

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Introduction:

Technological advancements in communication and information technology and the spreading of e-knowledge among schools and universities students led to the emergence of new forms of e-learning systems that have bypassed wire-based learning systems to the investment of wireless communication technology by using mobile devices and by this a new concept in learning field appeared, that is mobile learning.

Alhalafawy, W. S. (2011) seesthat mobile phones present the most technological forms that spread in the current era. So they are the most used tools for implementing the idea of mobile learning especially because they present many services such as using internet, surfing the web, sending emails, exchanging and operating multi-media messages, educational games and showing interactional educational lectures. (5: 159)

Odom, J. D. (2012) shows that mobile learning makes learners feel with freedom, presents to them the learning content, lets them study and learn in anywhere and anytime, reaching to data and information quickly and easily, communicating with teachers and colleagues without any difficulty, also it increases students motivation and encourage them to participate effectively in learning process, it makes learning more interesting and fun. It concentrates on structural theory that sees learners as knowledge founder. forms of presenting the content by using mobile phone varies from discussion, activities, educational videos, summaries, self-evaluation questions through available communication channels. (20: 10-17)
Paul, T. V. (2014) sees that the best practices to design Mobile learning is dividing the educational content into small parts or educational modules. Studying how learners interact with educational modules and reaching to educational content on the time, merging social technology to enhance learning between colleagues, implementing video games principles (educational games) with educational subjects that teacher provides to motivate learners to participate effectively in the educational process. (21:33).

Abdulla, A. M. (2017) sees that rapid progress in technology of mobile devices applications helps in the spread of mobile learning. These devices have high technology, are light, easy to use, have high capacity batteries, able to recharge, they are small and easy to move with. They contain many applications that help in communicating with colleagues and teachers in anytime and anywhere. These devices had large amount of interest for majority of girl students, they were with them in every place and time without any obstacles. So it was necessary to use these mobile devices in the learning process to reach to the target aims through mobile learning. (3:3)

Research problem:

The researcher noticed through teaching the content of basic principles of group games, handball, for second year physical education girl students, Mansoura university, that there is a lack in acquiring some offensive skills in handball, this may due to boredom of learning using traditional methods followed in the information technology era and electronic learning. The researcher found that majority of girls has mobile phones that never separated them even during practical lectures without any benefit from those phones in the educational process.

Many researches and previous studies in mobile learning field assure that learning by mobile phones led to success in interaction with digital learning resources because of its spreading and easy to use in a technological social context in the digital society era with presenting feedback about students achievement and performance, that encourage them on active learning and increase of
motivation for learning. In addition to motivating students on participation and interaction with colleagues and make them reach to available educational curricula that motivate students on learning through mobile phones, Abdel Baqi, A. A. study (2013) (1), Awad, M. M. study (2014) (7), El-Desokey, M. A. study (2015) (11), Seely, B. J. study (2015) (24), Huang, G. study (2016) (16), Chen, S. study (2017) (8), Rettger, E. study (2017) (23) and Rady, B. A. study (2017) (22) agreed that mobile learning enhances education process because digital devices present interest, suspense and enjoyment for students to achieve educational tasks. So the researcher tried to benefit from these devices in the educational process and in teaching some offensive skills in handball for second year girl students, physical education faculty, Mansoura university.

Research aims:

The research aims to know The impact of an educational software using mobile phone on the performance level of some offensive skills in handball (receiving the ball, overhand pass, dribbling, the support step overhand shot, running shot and jump shot) for faculty of physical education girl students mansoura university.

Research hypotheses:

1- There are statistically significant differences between the means of pre-test and post-test measurements of the control group in the performance level of some offensive handball skills under research in favor of the post-test measurement.
2- There are statistically significant differences between the means of pre-test and post-test measurements of the experimental group in the performance level of some offensive handball skills under research in favor of the post-test measurement.
3- There are statistically significant differences between the means of the two post-test measurements of the experimental and control group in the performance level of some offensive skills in handball under research for faculty of physical education girl students in favor of the post-test measurement of the experimental group.

Research concept
Mobile Learning:

"It is learning that happens based on digital..."
devices able to carry in hand and through it we can see various learning contents without considering time and place”. (5 : 153)

**Research Procedures :**

**Research method :**

The researcher used the experimental method by designing two groups(experimental and control) he used the experimental in M Learning and the control in the traditional program. Pre and post measurements were implemented for the (2) groups and the average results of pre and post test measurements were compared.

**Research Population :**

Second year girl students, second term(2016-2017), faculty of physical education, Mansoura University. It was (351) girl studentsFor these reasons:

1- Second year students in the faculty have never studied or learned offensive skills (under research) in handball.

2- Handball course is a key course for second year girl students in the faculty and included the offensive skills under research and it is taught over (14) weeks with (2) lectures weekly one theoretical and the other practical each (120) minutes.

The researcher did not include (57) girls, (5) are staying to fail, (10) practicing handball, 8 had injured, (34) not attend regularly.

**Research Sample :**

It was randomly selected (100) girl students with (28.49%) from the population. It was divided into basic sample (80) girls, exploratory sample (20) girls, the basic sample divided into control and experimental groups each contain (40) girls.

**Moderate Distribution of the research sample:**

Skewness coefficient was measured for all measurements used in the research to assure that the basic sample was distributed moderately as in table (1).

<table>
<thead>
<tr>
<th>Table (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moderate distribution of basic sample in qualitative,</strong></td>
</tr>
</tbody>
</table>

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### Physical and Skill Tests N=100

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit of Measurement</th>
<th>Arithmetic mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>Skewness coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Qualitative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Year</td>
<td>19.67</td>
<td>19.70</td>
<td>0.41</td>
<td>0.16</td>
</tr>
<tr>
<td>Length</td>
<td>Cm</td>
<td>161.59</td>
<td>160.50</td>
<td>4.66</td>
<td>0.60</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>61.36</td>
<td>60.50</td>
<td>9.45</td>
<td>0.62</td>
</tr>
<tr>
<td>2 Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running(30) m from high start</td>
<td>Second</td>
<td>6.04</td>
<td>6.02</td>
<td>0.62</td>
<td>0.38</td>
</tr>
<tr>
<td>Barro zigzag running</td>
<td>Second</td>
<td>28.45</td>
<td>28.28</td>
<td>1.60</td>
<td>0.35</td>
</tr>
<tr>
<td>Bending trunk front and down from standing</td>
<td>centimeter</td>
<td>5.65</td>
<td>5</td>
<td>4.38</td>
<td>0.13</td>
</tr>
<tr>
<td>Vertical jump</td>
<td>centimeter</td>
<td>25.34</td>
<td>25</td>
<td>4.11</td>
<td>0.31</td>
</tr>
<tr>
<td>Throw the handball to the farrest distance</td>
<td>meter</td>
<td>12.17</td>
<td>12.10</td>
<td>3.43</td>
<td>0.58</td>
</tr>
<tr>
<td>Shooting on overlapping triangles</td>
<td>mark</td>
<td>9.53</td>
<td>9.50</td>
<td>3.42</td>
<td>0.47</td>
</tr>
<tr>
<td>3 Skill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving and passing on the wall (30) s</td>
<td>Number</td>
<td>10.44</td>
<td>10</td>
<td>2.45</td>
<td>-0.19</td>
</tr>
<tr>
<td>Zigzag dribbling (30) m</td>
<td>Second</td>
<td>15.94</td>
<td>15.79</td>
<td>1.83</td>
<td>0.28</td>
</tr>
<tr>
<td>Support step overhand shot</td>
<td>mark</td>
<td>1.11</td>
<td>1</td>
<td>0.82</td>
<td>0.47</td>
</tr>
<tr>
<td>Jump shot on (2) squares</td>
<td>mark</td>
<td>0.66</td>
<td>1</td>
<td>0.70</td>
<td>0.58</td>
</tr>
</tbody>
</table>

From table (1) skewness coefficient values for qualitative, physical and skill tests were between (-0.19 : 0.62) that means they are between (±3) and this confirms that the sample was homogeneous in these variables.

**Research groups balance (control and experimental groups):**

The researcher conducts balance between the sample before program.
implementation in some tests as in table (2), qualitative, physical and skill

Table(2)
Differences significance between research groups in qualitative, physical and skill tests \( N_1 = N_2 = 40 \)

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Unit of measurement</th>
<th>Control Group</th>
<th>Experimental Group</th>
<th>Mean Difference</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Qualitative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>year</td>
<td>19.75</td>
<td>0.47</td>
<td>19.58</td>
<td>0.34</td>
</tr>
<tr>
<td>Length</td>
<td>Cm</td>
<td>161.57</td>
<td>4.70</td>
<td>162.12</td>
<td>4.47</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>61.51</td>
<td>9.85</td>
<td>60.57</td>
<td>8.03</td>
</tr>
<tr>
<td>Running(30) m from high start</td>
<td>Second</td>
<td>6.07</td>
<td>0.65</td>
<td>6.17</td>
<td>0.59</td>
</tr>
<tr>
<td>Barro zigzag running</td>
<td>Second</td>
<td>28.68</td>
<td>1.66</td>
<td>28.17</td>
<td>1.46</td>
</tr>
<tr>
<td>Bending trunk front and down</td>
<td>centimeter</td>
<td>5.87</td>
<td>4.33</td>
<td>6.10</td>
<td>4.72</td>
</tr>
<tr>
<td>from standing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical jump</td>
<td>centimeter</td>
<td>25.92</td>
<td>4.07</td>
<td>24.50</td>
<td>3.96</td>
</tr>
<tr>
<td>Throw the handball to the</td>
<td>meter</td>
<td>12.22</td>
<td>3.91</td>
<td>11.25</td>
<td>2.83</td>
</tr>
<tr>
<td>farrest distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shooting on overlapping</td>
<td>mark</td>
<td>9.17</td>
<td>3.47</td>
<td>9.50</td>
<td>3.60</td>
</tr>
<tr>
<td>triangles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving and passing on the</td>
<td>Number</td>
<td>10.45</td>
<td>2.17</td>
<td>10.25</td>
<td>2.75</td>
</tr>
<tr>
<td>wall (30) s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zigzag dribbling (30) m</td>
<td>Second</td>
<td>16.04</td>
<td>1.63</td>
<td>15.97</td>
<td>2.03</td>
</tr>
<tr>
<td>Support step overhand shot</td>
<td>mark</td>
<td>1.10</td>
<td>0.74</td>
<td>1.05</td>
<td>0.78</td>
</tr>
<tr>
<td>Jump shot on (2) squares</td>
<td>mark</td>
<td>0.70</td>
<td>0.68</td>
<td>0.63</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Table value of "T" at (0.05) and freedom degree (78) = 1.99
From table (2) there is no statistically significant differences between research groups at (0.05) level. T value calculated was lower than its table value, that confirms the balance of research groups in all measurements.

**Tools and methods of data collection:**

**Referential survey:**

The researcher conducts referential survey for previous studies and related scientific references (2), (7), (9), (10), (11), (12), (13), (15), (16), (17), (18), (19), (21), (23), (24) to determine physical tests related to handball skills under question attachment (1), suitable skill tests for handball skills in question attachment (2), Content of M Learning program for the experimental group attachment (5).

**Tools and devices used in the research:**

- Restameter to measure tallness.
- Medical scale to measure weight.
- Stop watch to measure time by seconds.
- Smooth throwback wall, chalk.
- Measurement tape, ruler.
- Handballs, handball playground, Swedish seats, Medical balls, steps boxes.
- Cones, square shot 60*60.
- Mobile phones (Android).

**Skill and physical tests:**

The most important physical qualitatives was set their tests, skill tests based on referential survey and they are:

**First: physical tests: attachment (1):**

1- Running (30) m from high start to measure transitional speed. (18: 107)
2- Zigzag running by Barro to measure elegance. (9: 193-195)
3- Throw handball for the farrest distance to measure arm muscle ability. (2: 3)
4- Vertical jump from standing to measure legs muscle ability. (9: 172, 173)
5- Bending the trunk front and down from standing to measure flexibility. (9: 195-197) (18: 97, 98)
6- Shotting on interacting triangles to measure accuracy. (13: 7)

**Second: skill tests: attachment (2):**

1- Passing and receiving on the wall. (17: 68)
2- Continuous dribbling for (30) m in a zigzag direction. (17: 179)
3- Shotting from stand firm. (19: 3)
4- Shotting from jumping on (2) squares 60*60. (17: 70) (2: 12)
Recording data forms: 
attachment (3):

The researcher designed forms to record sample measurements for the qualitative, physical and skill variables.

-Survey studies:
First survey study:
This survey study was conducted from Sunday 19/2/2017 to Thursday 23/2/2017 on the survey study sample (20) girls to know the suitability of M Learning program for students devices under question, and to assure the devices usability and tools used in the research and choosing suitable places to conduct tests.

Second survey study:
From Sunday 26/2/2017 to Wednesday 1/3/2017 on the survey study sample to assure sincerity and constancy of skills and physical tests used.

Scientific coefficient for skill and physical tests:
1-Test Validity:
The researcher used differentiation validity through implementing the test on the survey sample (indistinctive group) on Sunday 26/2/2017 then implementing the tests on another sample represents (distinctive group) from girl students and handball team in the faculty on Monday 27/2/2017, then measure differences between the groups to assure the validity of physical and skill measurements in differentiating between various levels. The results showed statistically significant differences between the groups for the sake of distinctive group, T value was between(3.18:17.58) larger than its table value at (0.05) level that assured the validity of tests in measuring the aim of it.

2-Test Reliability:
The researcher implemented the test and re implement it through applying on survey sample 20 girl students from the same population out of basic sample, then re implement it after 3 days on the same group and time to unit measurement as possible, calculate correlation coefficients to assure the reliability from Sunday 26/2/2017 to Wednesday 1/3/2017. The results showed correlative relation between first and second implementation in skill and physical measurements, calculated coefficient values.
ranged from (0.78:0.93) larger than table value at (0.05), so the tests are reliable.

**Mobile Learning Program Design:**

The researcher used Algazar model (2014) (12) third edition for educational design for M Learning program under question attachment (5), that include five stages.

**First: Analysis Stage:**

Characteristics of second year girl students, their previous learning, their educational needs are analyzed. In addition to the analysis of content and available digital sources (mobile phones) that operate the educational program that will be implemented inside handball playground without the need to connect the internet. Available learning objects such as written texts, fixed and moved photos, videos that can be used in clarifying information and achieving educational aims.

**Second: design stage**

Here educational aims were formed (general and behavioral objectives) content elements for each module were determined (objectives, activities, skill photo, skill video, application activity, evaluation) designing means of moving that allow the use of basic elements, progress toward forward, return back, moving or going out in anytime. Designing method of interaction between teacher and students face to face by M Learning program that don't based on the web, but by practical practices inside handball playground using M phones that contain the program.

**Third: establishment and production stage**

Here the treatment of texts, fixed photos and videos to be valid to show on M Learning devices and activating it in pages of M Learning program through asking educational software designer.

**Fourth: evaluation stage**

Here the program was showed on a group of specialist in Curriculum and teaching methods, handball and education technology in physical education faculties and faculties of education attachment (4) to assure that the scientific subject suitable to achieve the aims and show sequence and the suitability of written elements, photos and videos interaction and integral between these elements and
Fifth: the usage stage

Here the researcher applied M Learning program on the sample to know the difficulties that may appear during applying actual experiment and try to overcome it.

Table (3)

<table>
<thead>
<tr>
<th>Main parts (75 minutes)</th>
<th>M Learning program subjects</th>
<th>Module</th>
<th>Day and date</th>
<th>Content element for each module</th>
<th>time</th>
<th>Tasks and activities girl students perform</th>
<th>Learning objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- learning the skill of catching the ball from different levels.</td>
<td>first</td>
<td>Saturday 11/3/2017</td>
<td>objectives</td>
<td>(3) minutes</td>
<td>Reading the general objective, behavioral objectives (cognitive, skill, emotional)</td>
<td>text</td>
<td></td>
</tr>
<tr>
<td>2- learning the skill of overhand pass.</td>
<td>second</td>
<td>Saturday 18/3/2017</td>
<td>Learning activity</td>
<td>(10) minutes</td>
<td>Reading the written text that clarify skill importance, when to use, way to perform</td>
<td>text</td>
<td></td>
</tr>
<tr>
<td>3- learning the skill of overhand pass from running.</td>
<td>third</td>
<td>Saturday 25/3/2017</td>
<td>Skill photo</td>
<td>(3) minutes</td>
<td>Watching skill photo</td>
<td>Fixed and serial photo</td>
<td></td>
</tr>
<tr>
<td>4- learning the skill of dribbling the ball.</td>
<td>Fourth fifth</td>
<td>Saturday 1/4/2017 Saturday 8/4/2017</td>
<td>Skill video</td>
<td>(4) minutes</td>
<td>Watching video that clarify skill performance</td>
<td>video</td>
<td></td>
</tr>
</tbody>
</table>
### Follow Table (3)

**Content elements details included in the learning modules for M Learning Program, its time distribution, tasks and activities girl students perform**

<table>
<thead>
<tr>
<th>Unit parts</th>
<th>M Learning program subjects</th>
<th>Module</th>
<th>Day and date</th>
<th>Content element for each module</th>
<th>time</th>
<th>Tasks and activities student performs</th>
<th>Learning objects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-</td>
<td>learning the skill of support step overhand shot. 6- learning the skill of running shot.</td>
<td>sixth</td>
<td>Saturday 15/4/2017</td>
<td>Application activity</td>
<td>(50) minutes</td>
<td>Application exercises, student reads the exercise, watches the photo, performs it. For each exercise</td>
<td>Text Fixed photo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-</td>
<td>learning the skill of overhand shot by jumping high.</td>
<td>Seventh eighth</td>
<td>Saturday 22/4/2017 Saturday 29/4/2017</td>
<td>evaluation</td>
<td>(5) minutes</td>
<td>Questions for revision on module activities; choose, true or false. Immediate feedback</td>
<td>Text Fixed photo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following are examples of some of M learning program screens:

![Image of M learning program screens]

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Executive steps for the research:

1-pre-test measurements: The researcher conducted pre-test measurements for both groups in the period from ...

2-implementation of the experiment:
The experiment was applied on the research sample from Saturday 11/3/2017 to Sunday 30/4/2017 for (8) weeks. The educational program was implemented using M learning for the experimental group in the main part of the educational unit on Saturday of each week, apply the traditional program of the control group on Sunday of each week.

3-post-test measurements:
Post measurements of the two research groups were conducted on skill measurements on Wednesday and Thursday 3,4/5/2017.

Statistical processes:
The researcher used the statistical package for social sciences (SPSS) to calculate the statistical coefficients used in the research, arithmetic mean, median, standard deviation, Skewness coefficient, T test for independent and paired samples, Person simple correlation coefficient, improvement ratio.

Showing and discussing research results:
Within the scope of the research plan and procedures, the researcher reached through the statistical treatments used for a set of results in the light of the research hypotheses, the researcher presented them in a table then interpreted and discussed.

First: showing results of the first hypothesis:
The researcher calculated the significance of the differences and the improvement ratios between pre and post measurements of the control group in the skill tests under research, as shown in table (4).

<table>
<thead>
<tr>
<th>Tests</th>
<th>Pre-test measure</th>
<th>Post-test Measure</th>
<th>Mean Difference</th>
<th>T-value</th>
<th>Improvem entratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passing and receiving on the wall (30) s.</td>
<td>10.45 2.17</td>
<td>15.75 2.27</td>
<td>-5.30</td>
<td>14.43*</td>
<td>50.72</td>
</tr>
</tbody>
</table>

Table (4)
Differences significance between pre and post measurements for the control group in skill tests N=40
### Follow Table (4)

**Differences significance between pre and post measurements for the control group in skill tests N=40**

<table>
<thead>
<tr>
<th>Tests</th>
<th>Pre-test measure</th>
<th>Post-test Measure</th>
<th>Mean Difference</th>
<th>T-value</th>
<th>Improvem entratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>Std. Deviation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dribbling the ball (30) m zigzag direction.</td>
<td>16.04 1.63</td>
<td>12.81 1.41</td>
<td>3.23</td>
<td>16.02*</td>
<td>20.14</td>
</tr>
<tr>
<td>Support step overhand shot.</td>
<td>1.10 0.74</td>
<td>3.30 0.82</td>
<td>-2.20</td>
<td>14.81*</td>
<td>200</td>
</tr>
<tr>
<td>Jump shot on (2) squares.</td>
<td>0.70 0.68</td>
<td>2.48 0.85</td>
<td>-1.78</td>
<td>15.31*</td>
<td>254.29</td>
</tr>
</tbody>
</table>

*Significant at the (0.05) level.

Table value of "T" at (0.05) and freedom degree (39) = 2.02

From table (4) there are statistically significant differences between pre and post measurements of the control group in skill tests under research in favor of the post measurement, the calculated values of T were between (14.43:16.02), which were larger than its table value at (0.05), that confirms the improvement of the control group in skill tests as shown in the table below. The highest improvement ratio was in the jump shot on (2) squares test.

**Second: showing results of the second hypothesis**

The researcher calculated the significance of the differences and the improvement ratio between pre and post measurements for the experimental group in skill tests under question, as shown in table (5)
Table (5)
Differences significance between pre and post measurements for the experimental group in skill tests N=40

<table>
<thead>
<tr>
<th>Tests</th>
<th>Pre-test measure</th>
<th>Post-test Measure</th>
<th>Mean Difference</th>
<th>T-value</th>
<th>Improvement ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>Std. Deviation</td>
<td></td>
</tr>
<tr>
<td>Passing and receiving on the wall (30)s.</td>
<td>10.25</td>
<td>2.75</td>
<td>19.05</td>
<td>2.74</td>
<td>-8.80</td>
</tr>
<tr>
<td>Dribbling the ball (30) m zigzag direction.</td>
<td>15.97</td>
<td>2.03</td>
<td>11.09</td>
<td>1.26</td>
<td>4.88</td>
</tr>
<tr>
<td>Support step overhand shot.</td>
<td>1.05</td>
<td>0.78</td>
<td>4.10</td>
<td>1.17</td>
<td>-3.05</td>
</tr>
<tr>
<td>Jump shot on (2) squares.</td>
<td>0.63</td>
<td>0.70</td>
<td>3.10</td>
<td>0.78</td>
<td>-2.47</td>
</tr>
</tbody>
</table>

*Significant at the (0.05) level.

Table value of "T" at (0.05) and freedom degree (39) = 2.02

Table (5) shows that there are statistically significant differences between pre and post measurements of the experimental group in skill tests under research in favor of the post measurement. T calculated values between (16.77:14.40) which are larger than the table value at (0.05), that confirms the improvement of the experimental group in skill tests. The highest improvement was in jump shot on two squares test.

Third: showing results of the third hypothesis

the researcher calculated the significance of the differences and improvement ratio between the two groups in the post measurement in skill tests as in table (6).
### Table (6)
Differences significance between post measurements of experimental and control group in skill test N1=N2=40

<table>
<thead>
<tr>
<th>Tests</th>
<th>Control group</th>
<th>Experimental group</th>
<th>Mean Difference</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>Std. Deviation</td>
<td></td>
</tr>
<tr>
<td>Passing and receiving on the wall (30)s</td>
<td>15.75</td>
<td>2.27</td>
<td>19.05</td>
<td>2.74</td>
</tr>
<tr>
<td>Dribbling the ball (30) m zigzag direction</td>
<td>12.81</td>
<td>1.41</td>
<td>11.09</td>
<td>1.26</td>
</tr>
<tr>
<td>Support step overhand shot</td>
<td>3.30</td>
<td>0.82</td>
<td>4.10</td>
<td>1.17</td>
</tr>
<tr>
<td>Jump shot on (2) squares</td>
<td>2.48</td>
<td>0.85</td>
<td>3.10</td>
<td>0.78</td>
</tr>
</tbody>
</table>

*Significant at the (0.05) level.

From table (6), there are statistically significant differences between the two post measurements for control and experimental groups in skill tests under research in favor of the experimental group post measurement, calculated T values ranged between (3.44:5.86) which are larger than its table value at(0.05), That emphasizes the improvement of the experimental group in skill tests under question more than the control group.

**Discussion of the results :**

First: discussing results of the first hypothesis:

Table (4) shows that there are statistically significant differences between pre and post measurements of the control group in skill tests under research in favor of the post measurement, the values of T were calculated between(14.43:16.02) which are larger than its table value at(0.05),that confirms the improvement of the control group in skill tests also the table shows that the highest improvement ratio was in the jump shot on two squares test, the researcher due this to the traditional method used based on explaining, presenting a skill model, clarifying the skill
importance, how to perform, and the most important technical points to focus on for success in skill performance then repetition of skill performance with a series of gradual exercises in difficulty from easy to difficult and from simple to complex with correcting errors and providing feedback, all this had a positive impact in allowing students present their best performance in handball skills under consideration.

These results consistent with what Faheem, M. M and Taha, A. M. (2015) pointed out that the traditional method is based on the teacher in making all the decisions that are related to the teaching process and that the learners have to implement them. The teacher explains and displays the skill to be learned in front of the students, decide suitable repetitions for different practices and the required level for performance, starting; stopping; moving from a step to another then presenting feedback, the use of this method is spread in the first stage in learning any new skill. (14:111,112)

These results are consistent with the study of Abdel Baqi, A. A. (2013) (1), Kurdi, B. O. (2014) (19), El-shamy, N. M. (2015) (13), Abdul Razaq, N. K. (2016) (2), all agreed that the traditional practice followed has positive effect on the learning, improvement and development of basic handball skills, thus validating the first hypothesis, which states that "There are statistically significant differences between the means of pre-test and post-test measurements of the control group in learning some offensive handball skills under research in favor of the post-test measurement".

**Second: discussing results of the second hypothesis**

Table (5) shows that there are statistically significant differences between the pre and post measurements of the experimental group in the skill tests under research in favor of the post measurement, The value of "T" calculated were between (14.40:16.17) which are larger than the table value of "T" at (0.05), which confirms the improvement of the experimental group in the skill tests under research, as shown in the table the highest improvement ratio was in the test shot jump on two squares, the researcher due this to the
mobile learning program as a new educational model is easy to apply, can use available learning objects from written texts, fixed and animated photos and videos in the clarification of information and achievement of educational objectives, and identify the elements of the content of each educational module that are (objectives – educational activity – a photo of the skill – video for the skill – application activity – evaluation), designing mobility means that allow student to use the main elements and move forward or back whenever you want or go out at any time you want, and to design the interaction method between the teacher and the students face to face through the mobile learning program that does not rely on the international network of information, but through practice in handball playground using mobile devices containing the program, and that had a significant positive effect in learning handball skills.

Alhalafawy, W. S. (2011) emphasizes that M Learning is most successful because it allow presenting various learning activities through mobile learning environments. These activities correspond to Bloom learning levels, representing content (text, pictures, videos) in learning meets the level of remembering, presenting tests meets the level of understanding, and providing students with learning materials in the correct time that enable them to apply these materials in practical situations meets the level of application, indicating the ability to employ M Learning environments effectively in the service of learning process in light of educational levels. (5: 175, 176)

These results are consistent with the results of the studies of Odom, J. D. (2012) (20), Paul, T. V. (2014) (21), El-Desokey, M. A. (2015) (11), Abdulla, A. M. (2017) (3), Chen, S. (2017) (8) and Rady, B. A. (2017) (22) which pointed out that the services provided by mobile phone must be employed, legalized and benefit from it in the field of education because it has effective role in improving the skill performance, by this we find that the second hypotheses is valid, which states that "There are statistically
significant differences between the means of pre-test and post-test measurements of the experimental group in learning some offensive handball skills under research in favor of the post measurement.

**Third: discussing results of the third hypothesis**

Table (6) shows that there are statistically significant differences between the two post measurements of the control and experimental groups in the skill tests under research in favor of the post measurement of the experimental group. $T_{cal}$ calculated values ranged from (3.44:5.86), larger than its table value at 0.05 level. That emphasizes the improvement of the experimental group in skill tests under question more than the control group. This due to the use of M Learning program that included skills show, way of performance, viewing details of performance clearly through photos, videos, the ability to repeat the learning content several times at any time during the day; before during and after the learning unit through personal mobile phones, this made the students interact with the learning program according to their abilities and understanding the situation. By doing this the experimental group was more successful than the control group in learning some offensive skills in handball.

Aldahshan, G. A and Sharaf, S. S. (2013) pointed that mobile phone may present many educational services, also it may achieve specific learning and training objectives that cannot be achieved effectively by other ways. Learning system through mobiles allow teachers, lectures and supervisors to present their training, learning and professional materials on the different mobile phones and knowing the results of exercises, points of weakness and strength for each student. Also it allows students to follow lessons and exercises and self-learning. By this it saves effort and time for students and faculty members, that facilitates technical communication process among all frameworks. (4: 9, 10)

Alhays, M. A. (2017) emphasizes that mobile phones have good abilities that help learners get, treat, save, restore and use information by its different forms in learning
situations. This has a strong effect on the learning process. The traditional model has never been enough because of the emergence of new model that is M Learning. (6 : 193)


Conclusions
1- The use of prepared educational software by mobile phone has a more positive and effective impact than traditional learning on the performance level of some offensive skills in handball (ball receiving, overhand pass, dribbling, the support step overhand shot, running shot and jump shot) for faculty of physical education girl students, Mansoura university.
2- The experimental group achieved the highest results in the improvement ratios in the performance level of some offensive skills in handball (ball receiving, overhand pass, dribbling, the support step overhand shot, running shot and jump shot) for faculty of physical education girl students, Mansoura university in comparison with what the control group achieved.

Recommendations:-
1- Using the educational software prepared by mobile phone in the teaching of offensive skills in handball for girl students of the faculty of physical education Mansoura university.
2- Conducting more studies aimed at recognizing the effectiveness of mobile learning on the cognitive and emotional aspects.
3- Interest in educating faculty members in the faculties of physical education of the importance of benefiting from mobile phone applications and activating them in their courses because of its positive role in
supporting the educational process in different disciplines.

References:
2- Abdul Razaq, N. K.: A proposed program to learn some offensive skills in handball using educational modules and its impact on learning outcomes for students of the Faculty of Physical Education, University of Anbar in Iraq, doctoral thesis, faculty of physical education for girls, Alexandria University, 2016 AD.
10- Ebraheem, M. G.: handball for all (complete

11- El-Desokey, M. A.: The Effect Of Mobile Learning On Cognitive Achievement And Some Motor Skills And Reducing Learning Anxiety In Handball For The Hearing Impaired, doctoral thesis, Faculty Of Physical Education For Boys In Abu Qir, Alexandria University, 2015 AD.


13- El-shamy, N. M.: Effectiveness of Technical program for learning TeamPlans in Handball on the Cognitive achievement and Tactical Performance for students at the Faculty of Physical Education, doctoral thesis, faculty of physical education for girls, Alexandria University, 2015 AD.


20- Odom, J. D.: A study of the impact of mobile phones as learning tools for youth in southern Baptist churches, the Faculty of the School of Church and Family Ministry Southwestern Baptist Theological Seminary, Doctoral Thesis, 2012.


