ABSTRACT

Sport scientists strive to optimize sports performance to achieve the goal, they must consider motor learning. The motor learning is a prerequisite of learning sports techniques for their continuous refinement and modification during the long term planning as well as short term process. The motor learning mainly has two types one is sports type another is stunt type. In this study we have taken only sports type of motor learning. Here motor learning refers to “Ease with which an individual learns new motor skill”.

The purpose of this study was to investigate the response of certain asanas and exercises programme on selected motor-learning tests.

For this study 400 male students of Brilliant Public School Aligarh were selected randomly. The age of the subjects was 12 to 14 years. The purpose of study was clearly explained to the subjects. The subjects were randomly assigned in to four groups. The experimental group ‘A’ was asanas group, ‘B’ exercises group, ‘C’ combined group of exercises and yogic asanas and ‘D’ control group. Each group consisted of 100 subjects.

The experiment was conducted for a period of twelve weeks in 5 days per week. The experimental group ‘A’ did 10 yogic asanas
program included shirshasansa, sarvangasana, matsyasana, halasana, bhujiangasana, salabhasana, dhanurasana, arth-matsyendrasana, pashchimottanasana, chakrasana. The experimental group ‘B’ did exercise program consists of spinal rock, back over, side stretches, alternative prove lift, one leg jumping, line walking after front roll, 5-meters dash, raising the hands with folded hands, walking on hands with partners, stride stretches. The experimental group C did exercise and asanas programme combined. The experimental groups practice 5 days in week at 7.30 a.m. to 8.30 a.m. in Brilliant Public School Aligarh.

The whole training programme for the experimental groups ‘A’, ‘B’ and ‘C’ was carefully and systematically planned. The experimental groups ‘A’, ‘B’ and ‘C’ underwent the training programme on asanas, exercises and the combined (asanas and exercises) respectively under the guidance of six research assistants. The control group ‘D’ was not undergone any training programme and was instructed to do only their daily routine work.

The pre and post test data was collected with the help of Adams sports type test which consist four test items namely as follows- Wall volley test, Lying tennis ball catch, Ball bounce test and Basketball shooting test.
COLLECTION OF DATA- The following pre and post experimental data of the set criterion measures were obtained.

<table>
<thead>
<tr>
<th>Criterion measures</th>
<th>Groups</th>
<th>Pre-Experimental Mean</th>
<th>Post - Experimental Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall volley test</td>
<td>Yogic Group-Exercises Group-Combined Group-Control Group</td>
<td>27.71 27.01 27.59 27.72</td>
<td>37.56 32.75 40.56 29.08</td>
</tr>
<tr>
<td>Lying tennis ball catch</td>
<td>Yogic Group-Exercises Group-Combined Group-Control Group</td>
<td>3.77 3.85 3.93 3.82</td>
<td>5.25 5.01 5.72 3.69</td>
</tr>
<tr>
<td>Ball bounce test</td>
<td>Yogic Group-Exercises Group-Combined Group-Control Group</td>
<td>45.35 45.25 45.18 45.91</td>
<td>65.55 56.25 58.34 47.45</td>
</tr>
<tr>
<td>Basketball shooting test</td>
<td>Yogic Group-Exercises Group-Combined Group-Control Group</td>
<td>7.61 7.69 7.93 7.13</td>
<td>9.30 8.85 10.52 7.05</td>
</tr>
</tbody>
</table>

In order to find out the differential effects of the experimental treatments, analysis of covariance F-ratio (ANCOVA) was applied to find out the significant difference in the three experimental groups and control group mean. The level of significance chosen was .05.

Results of the statistical analysis showed significant F-ratio for wall volley test ($F = 341.53$), Lying tennis ball catch ($F = 104.24$),...
Ball bounce test (F = 181.77) and Basketball shooting test (F = 394.68). F-ratio required for significance at 0.05 level of confidence was 2.62.

Further, post hoc analysis of the results shows that in most of the cases combined group (asanas and exercises) was better than asanas group and asanas group was better than exercises group. For each of the chosen measure where F-ratio was significant, the post hoc analysis goes as.

**WALL VOLLEY TEST (W.V.T.), LYING TENNIS BALL CATCH (L.T.B.C.) & BASKETBALL SHOOTING TEST (B.B.S.T.):** Combined group had brought greater increase in the W.V.T., L.T.B.C. & B.B.S.T of the subjects than asanas group, and asanas group was more effective than exercises group.

**BALL BOUNCE TEST**- Asanas group had brought greater increase in the ball bounce of subjects than combined group (asanas and exercises), and combined group was more effective than exercises group.

The results of this study and conditions within the limitation of present experiment seen to present the following conclusions.

1- The performance in motor learning can be improved by exercises, yogic asanas and combination of exercises and yogic asanas training.
Evidence has been found which indicates statistically significant difference in the performance of Wall volley, Ball bounce and Lying tennis ball catch and Basketball shooting at 0.05 level of confidence.

Evidence also has been found that the mean gain achieved by combined exercises and yogic group higher in wall volley, Lying tennis ball catch and basketball shooting, but the mean gain achieved by yogic asanas group was higher in ball bounce.

Combined group (asanas and exercises) was higher than asanas group and exercises group in the improvement of the performance in Wall volley test, Lying tennis ball catch, Basketball shooting test.

Asanas group was higher than combined group and exercises group in the improvement of the performance in ball bounce test.