Effectiveness of a Recreational Program Using Adventure Games in Developing Curiosity of First Phase of Basic Education Students

Hala Mohamed Omar

Department of Sports Recreation, Faculty of Physical Education, Tanta University, Egypt

Abstract: The current research aims at designing a recreational program using adventure games for developing curiosity of first phase of basic education students. The researcher presented the recommended program to experts of recreation and psychology before applying it to a sample of 30 students (4th grade of first phase of basic education) at Mostafa Sadek Al-Rafee Primary School - Tanta. The program took 12 weeks during regular physical education lessons (from 13/2/2010 to 13/5/2010). The researcher performed pre-tests from 9/2/2010 to 11/2/2010. Post-tests were done from 15/5/2010 to 17/5/2010. The researcher concluded that there are statistically significant differences between pre- and post-tests on curiosity of first phase of basic education students in favor of post-tests. This development is due to the application of the recommended recreational program using adventure games as it has a positive effect.

Key words: Recreational program • Adventure games • Curiosity

INTRODUCTION

Play, movement, curiosity and knowledge are types of basic needs necessary for the child. The child acquires information and his/her knowledge improves through the experiences he/she is doing through his/her senses [1].

Studies indicated that learning to move is more than acquiring motor skills as the child, through movement, develops his/her cognitive, creative and notice abilities as well as his/her sense of time, place and balance besides gaining cognitive experiences [2]. Also pointed out that small games satisfy the individual's needs to understand and know. These needs manifest itself in the desire to discover hidden facts and curiosity [3].

Small games are one of the most important aspects of adventure programs develop several values like self-confidence, getting ride of fear, curiosity, creative problem-solving and satisfying the challenge spirit [5].

Literatures says that adventure in sports recreation is connected with sports activities' patterns that include risk taking and fun at the same time. Societies should encourage their organizations to provide a wide range of adventure opportunities for individuals who live under difficult economical circumstances like those who live in small houses, compared to those who have higher economical level Adventure programs depend on using some factors like air currents, gravity and altitude (as in wall climbing). When the place is not available, arrangements like air rope competitions and confidence training can be done as exciting competitions [5].

Researches as well demonstrated that individual's involvement in adventure activities enables him/her to confront nature. This provides the individual with opportunities of excitement, thrill and enjoyment and enables him/her to feel self-appreciation. According to "Seeking Excitement" theory of Ellis, the individual should maintain the level of stimulation besides reacting to environment [6]. A relevant studies pointed out that adventure programs develop several values like self-concept, self-respect, confronting new challenges, self-confidence, getting ride of fear, curiosity, creative problem-solving and satisfying the challenge spirit [5].

It is indicated that curiosity is the corner stone of developing many mental functions that have become a must in our modern age, characterized by fast scientific explosions [7]. Satisfying curiosity depends, in a large part, on the environment where the individual lives. Rich and complex environment stimulates a kind of exclamation and seeking explanations, compared to poor shallow environment [8].

Corresponding Author: Hala Mohamed Omar, Department of Sports Recreation, Faculty of Physical Education, Tanta University, Egypt.
Several studies agreed that motor activity serves several important central functions as it is considered as a learning tool in less dangerous situations. It provides the child with the opportunity to discover new behavioral compounds inside safe boundaries of play [5-21]. It is emphasized that curiosity is a major component of creativity and the basic need for us, as a developing nation, before developing our natural resources, is to develop our human resources through curiosity, especially in childhood as it is the stage of forming the human character [22].

The researcher thinks that adventure games develop curiosity as curiosity is a motive connected with exploring and adapting to environment. Adventure games include coping with environmental difficulties through creativity and exploration to satisfy the child's curiosity.

The researcher performed this study to identify the effectiveness of a recreational program using adventure games on developing curiosity of first phase of basic education students.

MATERIALS AND METHODS

For developing curiosity of first phase of basic education students through a recreational program using adventure games, the researcher used the quasi-experimental approach with one-group design (pre-/post-tests) on random sample of 30 students (4th grade of first phase of basic education) at Mostafa Sadik Al-Rafee Primary School - Tanta for the academic year 2009-2010. For these reasons:

- The school is equipped with tools and playgrounds, appropriate for implementing the program.
- This age group in the best stage to administering curiosity.
- Having approval of subjects in willing participation.

The researcher homogenized the sample and calculated squewness of variables affecting curiosity.

These variables are age, intelligence, socio-economic level and verbal and pictured curiosity as shown in Table 1 [23-31].

Table 1 showed that Squewness values for all variables ranged between -0.90 as a minimum value and 0.72 as a maximum values. Thus, values ranged between ±3 indicating that the research community is free of radical distributions and sample is homogeneous.

The researcher used an applied measurement in many studies: "The Pictured Intelligence Test" that measures general mental abilities of individuals in the age group of 8:17 years. The test depends on identifying the relations among a group of figures and identifying the odd one out. Test duration is 30 minutes. It is suitable for the sample age group and enjoys high validity and stability. Its validity ranged between 0.82 and 0.90 and stability ranged between 0.82 and 0.95. The researcher re-calculated validity and stability on a sample of 16 students from the researcher community and outside the main sample. Differential validity value was 6.25 and test/re-test stability value was 0.94 [8, 11, 12].

The researcher applied the socio-economic level questionnaire. It contained (parents' jobs - parents' income - parents' educational level - parents' accommodation – family size). This questionnaire was used in many studies, its validity ranged between 0.75 and 0.84 and stability ranged between (0.72 and 0.92). The researcher re-calculated validity and stability on a sample of 16 students from the researcher community and outside the main sample. Validity value was 4.65 and stability value was 0.89 [7, 11, 22].

The researcher applied the pictured curiosity test (The Arabic version), the test includes sets of two figures and the child is asked to choose the more interesting figure to him/her. It is found out that children with high level of pictured curiosity tend to choose unusual figures [7, 8, 11, 12, 18].

Its validity ranged between 0.62 and 0.82 and stability ranged between 0.82 and 0.97. The researcher re-calculated validity and stability on a sample of (16)
students from the researcher community and outside the main sample. Differential validity value was 26.12 and test/re-test stability value was 0.95.

The researcher applied the verbal curiosity test, The Arabic version [7, 8, 11, 12, 18]. Its validity ranged between 0.65 and 0.85 and stability ranged between 0.82 and 0.94. The researcher re-calculated validity and stability on a sample of 16 students from the researcher community and outside the main sample. Differential validity value was 14.48 and test/re-test stability value was 0.97. Total value of validity for the curiosity test was 17.71 and stability 0.98.

To prepare the recreational program using adventure games, the researcher reviewed related literature of curiosity and related literature on adventure games [9, 10, 13-20, 26] to be used in designing the program. These aims were presented to psychology and recreation experts. Table (2) shows these aims and the percentage of experts' agreement on them.

Experts agreed on the aims with a percentage between 80% - 100%. They recommended to merge the 2nd and 3rd axes and to add adventure spirit and excitement as an axis. The program contained adventure games to develop curiosity. These games included hopping, bouncing, crawling, passing, jumping, turning in circles, rebound and creative games and gymnastic skills included in curriculum.

The program contained 12 unites applied for 3 months (each unit is applied twice a week) during the regular physical education lesson (40 minutes). The bases of the program were as follows:

- Considering excitement, joy and fun during performance.
- Moving from low to high equipments.
- Considering age group characteristics (curiosity about new things – variation – desire to move).
- Considering moving from known to unknown games.
- Considering progression, individual differences and variation.
- Considering rest intervals between games.
- Considering safety rules.
- Regular safety check for equipments.

The researcher prepared the preliminary version of the program (aims - content - bases - methods of application - capabilities) and presented it to 7 experts of recreation and psychology who recommended minor modifications in equipments arrangements. The researcher applied the program to a pilot sample to identify its suitability for the main sample. The pilot study achieved its aims. Pre-tests for curiosity test (verbal/pictured) were done from 9/2/2010 to 11/2/2010. The program was applied for 12 weeks (13/2/2010 to 13/5/2010). Post tests were taken from 15/5/2010 to 17/5/2010.

RESULTS AND DISCUSSION

Table 3 showed statistically significant differences between the pre- and post- tests on p≤0.05 for curiosity tests in favor of the post-tests. (t) value for pictured curiosity was 9.15 and for verbal curiosity was 12.18 while its value for the total was 12.76. It is clear also that improvement percentage for pictured curiosity was 75.16% and for verbal curiosity was 54.32% while the value for total was 57.39%.

The researcher thinks that these results are due to the recommended recreational program using adventure games as it has a positive effect on developing both pictured and verbal curiosity. Students gained various motor experiences through the recreational units as these units concentrated on doing adventure games on equipments, leading students to with any difficulties in
Table 3: Means, SD, (t) test and Improvement percentage between pre- and post- tests on the research variables (n=30)

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
<th>M.F</th>
<th>A.f</th>
<th>£ A.f²</th>
<th>Value (t)</th>
<th>Improvement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pictured curiosity</td>
<td>15.70</td>
<td>2.90</td>
<td>27.50</td>
<td>5.50</td>
<td>11.80</td>
<td>5.53</td>
<td>1451.600</td>
<td>9.15</td>
<td>75.16%</td>
</tr>
<tr>
<td>2</td>
<td>Verbal curiosity</td>
<td>90.80</td>
<td>6.40</td>
<td>140.12</td>
<td>9.44</td>
<td>49.32</td>
<td>14.42</td>
<td>14271.090</td>
<td>12.18</td>
<td>54.32%</td>
</tr>
<tr>
<td>3</td>
<td>Total</td>
<td>106.50</td>
<td>7.60</td>
<td>167.62</td>
<td>7.94</td>
<td>61.12</td>
<td>19.63</td>
<td>19989.800</td>
<td>12.76</td>
<td>57.39%</td>
</tr>
</tbody>
</table>

(t) Table value on p ≤ 0.05 = 2.05

performance in various ways. The researcher thinks that adventure games are performed through creativity, variation and change. These games do not have standard rules. Instead, each student is free to discover the way to cope with the used equipment. This indicates that our children need such programs to develop their curiosity.

It was indicated that the student's freedom in discovering new movements, trying them out and identifying unusual movements through exploration and motor activities work on developing the child's curiosity [12, 22].

It is reported that child's curiosity is developed through programs containing creative and changing exercises and this is why hurdle gymnastics was very exciting for children who were willing to move, with directions, to discover new movements. This made them feel happy, joyful and confident. It is suggested that folk games develop curiosity as they are characterized by variation, newness and including new exciting moves [11, 12].

In addition, motor activities work on developing curiosity through seeking new experiences via exploring motor activities existing in the child's environment. This develops the child's focus and his/her desire of adventure and exploration [22].

It is indicated that adventure games require the individual to concentrate on what he/she is doing without hesitation as it includes a high degree of excitement and risk-taking without any recklessness inside the group. But they are exiting and include joyful experiences. These games do not end with a winner or a loser. Instead they need a kid of freedom in performing them and this is consistent to stimulate the child's interest. It is reported that recreational sports represent good opportunities to stratify the individuals' needs for adventure [5].

Recreational programs direct practitioners to confidence activities that depend on challenging skills like climbing, swinging, balance and steadiness on ropes. Regular camps in USA widen tier programs to satisfy youth needs for thrill and ultimate adventure through man-made obstacle in natural settings. The researcher thinks that it is necessary to design a recreational program using adventure games for the female students of first phase of basic education to satisfy their needs for curiosity and thrill. This proves the research hypothesis.

CONCLUSION

The recreational program using adventure games is effective in developing curiosity of female students of first phase of basic education. So, it is important to design such programs for other age groups. Studies for such programs application and evaluation should be done on a regular basis.

REFERENCES