The effect of computer plays on the she-students’ creativity of Marvdasht primary schools

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ARTICLE INFO

Article history:
Received 25 March 2014
Received in revised form 20 April 2014
Accepted 15 May 2014
Available online 4 June 2014

Keywords:
Creativity, Students, Computer play.

ABSTRACT

This study is to define the effect of computer plays on the she-students’ creativity of Marvdasht primary schools in 2013-2014. The universe included 70 ones sampled randomly. Having examined the case and by virtue of previous studies the measurement device was Turence creativity test verifying the students’ ability in four views: fluency, flexibility, innovation and extension; the test has enough validity and stability. The descriptive-inferential test was used to analyze the data; the findings indicated that the computer plays are positive and significant in the level of P>0.005 and they have positive effect on increasing the students’ creativity.

INTRODUCTION

Nowadays the communities are changing continuously due to information and communications development. Continuous development of sciences and technology and human’s interest in the children’s fate create hundreds of new challenges concerning their education and growth (Ahadi and Banijamali, 1998).

In line with this as wonderful phenomena the mass media especially the electronic ones have influenced mostly types of methods and technologies effective on human’s behavior (Abdolrahmani, 2006).

As an electronic accompanying computer plays have some role for many children, teenagers and young and as children’s toys the small computers’ development and frequency indicate that computer may be an effective educational instrument (Amin Varzli, 2003).

One of the important potentials of the computer play is its important influence on creativity growth. Creativity is a divine blessing appeared in human’s thought, behavior and practice and if it is not treated and exercised well, we may not benefit from it. Now many scientists and theorists believe human’s power is due to his (her) creativity (Aramfard, 2001).

Scientists have defined differently creativity and we presented some of them as follows:

Taylor believes creativity is the experiences formation in new arrangements (Ghassemi, 2002). Stein stated that creativity is the base of a process from a current so it is a process whose result should be a new work useful and satisfactory for someones for a while (Faghihi Ghazvini, 1991).

Classifying the definitions of creativity:

By virtue of actual sources and studies we may classify creativity into four levels: recognition, personality, environmental and the definitions based on production described briefly later.

Recognition definitions: This class emphasizes on high mental processes role in creativity.

Environmental definitions: Here creativity is due a social need motivating one to create new responses.

And finally creativity based on production: such definitions emphasize on the results and products from creative thought (Sam Khanian et al., 2002).

The conceptual definition of creativity is a mental process for a while led to a new effect from a new idea and different thing and such products may be verbally, nonverbally, objective or subjective (Afrooz, 2000).

Scientific definition of creativity:

One may create new ideas, views and perciplenceand reconstruction in sciences through discoveries not byregular process and led to new idea considered as an innovative and valuable phenomenon by related specialists (Hosseini Ghiri, 2003).
One of the contemporary attitudes is Amahil's regular creativity theory; by virtue of the theory creativity is formed of three essential dimensions of the subject skills, creative skills and duty motivation (Alborzi, 2007). Glifford believes that mind has 120 abilities of which five ones are known. These known abilities are divided into two small and big groups of memory abilities and the second group includes recognition, production and evaluation abilities and at the same time, such abilities are the special characteristics of creative people (Azari, 2001). Max Moitmer who is Gestaltist theorist believes in another type of creativity definition namely the creativity thought is the reconstruction of gestalts or the paradigm which is incomplete structurally and no contractual step is known by virtue of its functions but by examining total situation (Bastan, 2002).

Creativity process:
1 – Creativity process is the presentation of the case namely knowing the problem which is the first step to solve it.
2 – Preparing all data necessary to solve the problem or perform the duty.
3 – Creating ideas and possibilities: All sources and possibilities necessary to the case.
4 – Weekly process: Leaving the case for a while.
5 – Validity test: Testing different possibilities created in the third step.
6 – Assessment: This part is done by dividing into stop because the duty has been done successfully or there is no chance to achieve the proper goal (Amapoly reported by Ghassemzadeh, 1999).

By virtue of Wallace's view the creativity development strategies are as follows:
1 – Realism.
2 – Wittiness.
3 – Equipping mind.
4 – Challenges against actual situation (Azari, 2001).

The performances to achieve a creative thought are as follows:

Making notes of the problems, using all lists, deliberation, proposing questions and deliberating more deeply, taking into consideration the time limits concerning the solution, testing different solutions to find the best one, deliberation, collecting the facts related to the problem, criticizing and examining the solutions and requesting for others' help for to criticize and examine (Aghazadeh, 1999).

Great educators such as Froebel, Steiner, Montessori and Isaacs believe that the children's work basis should be based on play because child cannot sit on the chair for a long time daily. (Curtis reported by Khademi, 2003). Computer play has been interested in recent years and developed increasingly as a new mass media form since 1980s in a way that 9 of 10 American have done it in 1995 (Doran and Shaverdi, 2002 reported by Abdolrahmani, 2006); regardless unreal space and elements of the plays computer plays they are very similar to the elements, rules and results of the usual ones and many and even more people are interested in them (Abdolrahmani, 2006).

Like the phenomena the computer plays include vast dimensions and aspects and such variety have led to many definitions (Mahjoor, 2004).

Piaget said about play that considering children learn in the best way by active experience play and activity are the best way to learn for them. The main emphasis on the variety of such education is the experiences; at first they experience things and then are encouraged to describe surrounding things more (Cool, 2012).

Computer plays increased among Iranian teenagers since 2000. Such plays' responsibility and control were delivered to the Audiovisual Department of Cinema Assistance, Ministry of Guidance since early 2007 so the department established the Computer Plays State Foundation in 1999 to protect financially and scientifically the computer plays producers and announced the logo 'Asra' as the quality certificate of them. Now Iran is one of the eight countries who has classified the plays according to the player's age from 3 to 25 (Eskani, 2010).

Notwithstanding some of the computer plays may be creative some others may be harmful physically and mentally for the children. Many specialists believe that it had better the computer plays not be introduced to the children under three years and such children play with touchable andreal toys (Najafi Elmi, 2009). The psychologists believe that the addiction to computer plays creates serious disorders in behaviour and may be harmful to social relations. The familial hurts from technology may be moral, medical, cultural and social (Ahmadi, 2007) and considering some of the computer software are action and their design technology and science create more professional problems in the action shows; it can be said that they have played a very important role in anger creation and this is very important problem (Mehrabi, 2007). By virtue of previous studies the action plays increases the child's aggressive potentials; specially if he (she) always plays and practically the child pass too much time to play (Shaker, 2004).

The educational – mental hurts may be as follows:

Aggression increase in the children, their education decreases, addiction to computer plays, weak familial relations, children's and teenagers' autism, physical, seeing, skeletal and fatness disorders.

The positive effects of the computer plays:
The children learn more easily and pay more attention. The users need different skills to know the roles of the plays of which the most important is the skill to solve the problem. They increase seeing attention and creative thought. The children may create some stories and paintings by very varied programs in the market. The child may draw and change colours without dirtying his (her) clothes and surroundings. The physicians believe that the useful computer plays cause the child needs dwelling less. The computer plays enter the children into a world which is controllable by them so they enjoy it. They do computer plays during leisure time.

Considering all life aspects including school and work place and the role of computer in the children’s and students’ lifethe study examined the effect of computer life on the students of Marvdasht (Motahari, 2003). The universe included all she-students of primary schools in Marvdasht in 2013 – 2014 and the sample included 70 ones selected randomly.

**Study device:**

By virtue of Turence creativity scale two experimental and control groups were used and the creativity score was calculated by four personal fluency, flexibility, innovation and extension factors. The Turence test generally needs the responses presenting the nature of the figures drawn and imagined by the subject. The picture tests have been recommended for the levels of kindergarten to higher than high school and it was selected because it had validity and efficiency appropriate to the study. The test has been used frequently in educational studies and assessments. By virtue of the findings mentioned in the guidebook of the test the validity coefficient of the test is 80 – 90 percent (Turence, 1974).

In the first step the subject should draw a curve figure in a light colour which is the start point and then draw a picture and tell the name. Secondly he (she) should draw an incomplete picture and tell the name and thirdly he (she) draw 36 circles according to his (her) taste; each activity is done in ten minutes (Haghighat, 2003). Data analysis statistically: The data were analyzed by multivariable variance analysis (MANOVA) by SPSS21 software.

The descriptive findings indicated that 35 students do continuously computer plays and other 35 ones do not do them. The MANOVA findings were shown in Tables 2 and 3 compare the difference of the creativity dimensions (Fluency, flexibility, innovation and extension) between the students who do and do not the computer plays. The ‘F’ from Bilaei and Landa Vikles effect indicates that the difference between the two groups concerning the dependent variables is less than the significant rate (0.0005) and the Eta coefficient indicates that generally the dependent variables define 0.461 of the variance; such findings indicate that the two groups are different concerning the creativity dependent variables (Table 2).

**Table 1:** Groups’ standard mean and deviation:

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>35</td>
<td>271.06</td>
<td>79.07</td>
</tr>
<tr>
<td>Control</td>
<td>35</td>
<td>162.78</td>
<td>66.89</td>
</tr>
</tbody>
</table>

**Table 2:** Multivariable tests to define the significance of the group’s independent variable effect (The students who do and do not computer plays):

<table>
<thead>
<tr>
<th>Tests indexes</th>
<th>Value</th>
<th>'F' ratio</th>
<th>Hypothesis freedom</th>
<th>Error freedom</th>
<th>Significance rate</th>
<th>Effect rate (Eta coefficient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilaei effect</td>
<td>0.461</td>
<td>13.921</td>
<td>4</td>
<td></td>
<td>0.0005</td>
<td>0.461</td>
</tr>
<tr>
<td>Landa Vikles</td>
<td>0.539</td>
<td>13.921</td>
<td>4</td>
<td>65</td>
<td>0.0005</td>
<td>0.461</td>
</tr>
<tr>
<td>Henling effect</td>
<td>0.857</td>
<td>13.921</td>
<td>4</td>
<td>65</td>
<td>0.0005</td>
<td>0.461</td>
</tr>
<tr>
<td>Biggest root</td>
<td>0.857</td>
<td>13.921</td>
<td>4</td>
<td>65</td>
<td>0.0005</td>
<td>0.461</td>
</tr>
</tbody>
</table>

**Table 3:** A summary of MANOVA to compare the creativity dimensions in two groups (Who do and do not the computer plays):

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent variable</th>
<th>Total squares</th>
<th>Freedom rate</th>
<th>Squares mean</th>
<th>F</th>
<th>p</th>
<th>Effect rate</th>
<th>Statistical potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>p</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluency</td>
<td>108.129</td>
<td>108.129</td>
<td>10.389</td>
<td>0.002</td>
<td>0.133</td>
<td>0.888</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>49.729</td>
<td>49.729</td>
<td>3.530</td>
<td>0.065</td>
<td>0.049</td>
<td>0.457</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Genuineness</td>
<td>317.157</td>
<td>317.157</td>
<td>17.709</td>
<td>0.0005</td>
<td>0.207</td>
<td>0.986</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extension</td>
<td>352.129</td>
<td>352.129</td>
<td>21.821</td>
<td>0.0005</td>
<td>0.243</td>
<td>0.996</td>
<td></td>
</tr>
</tbody>
</table>

By virtue of the data analysis concerning the students who do and do not the computer plays we conclude that the computer plays influence positively their creativity.
Table 3 indicates that the difference of the fluency, genuineness and creativity extension dimensions are in the error rate of less than 0.002, 0.0005 and 0.0005 in the groups (The students who do and do not the computer plays), respectively. The statistical potential of 0.888, 0.986 and 0.996 indicate the acceptable statistic accuracy of the difference; in other words, the students who do and do not the computer plays are significantly different in fluency, genuineness and Turence creativity extension dimensions in a way that the first ones had higher creativity than the second ones, but their difference was not significant in flexibility dimension.

Discussion and conclusion:
By virtue of above Tables we see there is a significant difference between the experimental and control groups’ creativity in the rate of p< 0.0005 indicating the positive effect of the computer plays on the primary school students’ creativity; such findings are in accord with the Rudolf study in 2009.

Intellectual and enigmatic plays are of the strategies to develop the children’s creativity and innovation and the children should use their brain cells and mind more. The instructive software may play an important role in this regard. The positive effect of the computer plays has been proved on the students’ creativity in the studies and having observed following points the families may decrease the negative effects and dangers of such plays:
1 – The parents should know more or less the computer plays and know which plays are appropriate to which age.
2 – The parents should permit some plays for their children.
3 – The parents should guide their children to buy the computer plays.
4 – The parents should explain the disadvantages of the computer plays.
5 – The children should know that they should use the computer as moderately as other plays so they should be permitted to use the computer plays in defined and limited times; perhaps they resist in primary times, but gradually they are accustomed to use computer more regularly.
6 – Professor Pearson believes that the best solution is to put the computer out of the child’s room.
7 – The child should be active beside computer; he (she) should be encouraged to exercise.

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