The Impact of Television Viewing On the Academic Achievements of Students between Upper and Lower Socio-Economic Level in Karachi

Ghulam Mustafa Khan

ABSTRACT

Purpose: The main aim of this study is to determine the impact of television viewing on the academic achievements of school going age children. More specifically, the study addressed an intensive survey to determine the impact of leisure time television on the academic achievements of 5th class students.

Literature review: After a brief overview of some of the related research studies the ground realities and problems prevails in Pakistani Society regarding children grow up spending much of their free time watching television. Their childhood and life are shaped by the television.

Methods: The research strategy adopted for the study was Causal-Comparative Research, also known as ex Post-Facto Research. The population of the study was consisted of all the school going age children who had passed the annual examination of class V and currently studying in class VI in schools of five districts of Karachi both television viewers and non-viewers. The data was analyzed through descriptive statistical techniques and techniques of statistical inference.

Conclusion: The research revealed that the impact of television has been instant and profound. The study explored the major influence of television and relationship between children relative amount, nature, and extent of television viewing and their academic achievement in the schools in Karachi, Pakistan. Specifically, there were two main purposes of the study (1) To conduct and intensive survey to determine the impact (2) To make recommendations for the improvement

Suggestion: In fact, there is still need of more training in the strategic management of television viewing so that children can play their role more effectively to the nation

1. INTRODUCTION

1.1. Background

Television is one of the powerful electronic medium of mass communication, which invented in the year 1920. Television impact on a society has been profound. It has changed the life-style of people and become a major influence in the culture. Unlike printing, which took hundreds of years to influence the culture, television’s impact was almost instantaneous.
Television is currently undergoing major changes with a wide variety of technological developments including advances in cable television, fiber-optics, satellite communication, digital expression and the merger of television, computer and telephone technologies. Interactive TV, virtual reality and holography may be new forms of television entertainment.

Generally, television effects can be seen in leisure-time entertainment, information, rapid communications, accelerated growth of business and commerce, political and diplomatic exchange and overall cultural patterns.

In the field of education, the influence of television is well recognized. The effects of TV on children are as old as the medium itself. The first major media-effects studies “The Payne Fund Studies” conducted in the year 1929. Early concern centered around physiological effects (with starting at picture tube ruin a child’s eyesight”) as well as emotional or psychological effects. However, a review of the related literature shows that the impact of television on the education of school-going children is controversial i.e.

According to William and Haertel (1982) the result of this research studies indicated that “There is a slight negative relationship between Television viewing and achievement. Television does influence achievements, but its effect is small”. “The influence of Television on achievement depends on the amount of viewing time. Upto 10 hours per week of viewing may actually enhance achievement slightly. Beyond 10 hours, achievement diminishes with increased viewing upto 35 or 40 hours per week, and beyond that level, additional viewing apparently has little further impact.”

Websters (1998) concluded that “Television a ubiquitous and pervasive medium, has become a common and constant source of socialization of American adolescents. Because of Television’s appeal and widespread availability, it has enormous potential for teaching positive academic and social skills”

Al-Musalamy (1999) indicated that “In the United States, children grow up spending much of their free time watching Television, they grow up in what may be called the Television culture. Stempel (1981) points out that virtually everybody born in the US since 1940 is part of the Television generation; their childhood and life are shaped by Television”.

“Gerbner’s cultivation theory assumes that “the more time one spends watching Television, the more likely one is to perceive that Television images represent actual life realities”.

In Pakistan, a bill was passed in the National Assembly in October, 1963 for establishing Pakistan Television. The first Television station was setup in Lahore and the first Television Telecast inaugurated on November 26, 1964. During the last 42 years (1964-2006), mass Communication research remains slow in Pakistan. There is one or two basic attempts that were made on effects of Television’s Commercial and Dramas in Karachi. Since television is watched by school going age children all over the Pakistan, This study and result in the context of Karachi could be generalized in the border context of the Pakistan.

1.2. Scope

The Scope of the study was limited to all school going age children 9-13 years, who had passed class V and currently studying in class VI in schools of five districts of Karachi in Pakistan. They were both T.V. viewers and non-viewers.

1.3 Objective of the Study
1.3.1 General Objective

The overall purpose of the study is to determine the impact of television viewing on the academic achievements of school going age children.

1.3.2 Specific Objective

More specifically, the study addressed an intensive survey to determine the impact of leisure time television on the academic achievements of 5th class students.

The perception of respondents (students, teachers and parents) on various aspects of the topic were comparatively assessed and analyzed. The Study has raised and answered the following hypotheses

1.4 Hypothesis of the Study

Hypotheses Formation:  \textit{Null hypotheses} = Ho

\textbf{Ho}^1. There will be no significant difference between the academic achievements of school going children who view television and who do not

\textbf{Ho}^2. There will be no significant difference between the academic achievements of school going children male and female who view television.

\textbf{Ho}^3. There will be no significant difference between the academic achievements of school going children of upper social-economic level and lower social-economic level, who view television.

2. LITERATURE REVIEW

Television is being significant throughout the educational process (NIMH 1982). It has been called as “a unique potent teacher” (Liebert and Sparafkin 1988) and recognized as an educational curriculum in itself (Berry 1980).

Many scholars recognize television as a component to formal schooling. Television can be used to facilitate the development of academic and cognitive skills. Television manipulates social behaviour not only by teaching new behavior but also by contributing to children’s definition of what constitutes appropriate and inappropriate behaviour (Robert 1972). Yuki Fujiorka (1990) indicated that the frequency of television viewing stress the significance of viewers cognitive activities when consuming television messages.

Dewey (1927) argued that educated people possibly would make good use of media. He saw the problem of misinformation as one that should be solved through public education rather than through censorship. The media have a role in gender socialization. Cook, T., et al. (1975) has focused on the way in which males and females are represented in children’s educational programmes. Well-known researcher found that the watching of television, the male child was much more likely to be shown as heroic, whereas the female child was more likely to be shown as helpless and passive. It is possible that such messages affect attitudes and behaviors, particularly when reinforced within families and schools (Dohrmann (1975).

The earliest and simplest explanations of the impact of the media upon individuals is known as the \textit{“Hypodermic Needle Model”} (1950). It proposed that media influence was direct, one-way process. Messages are injected directly into the individual, and take root from there. The hypodermic model is too simple.
The models of the media, which evolved, later there was a criticism of the simplicity of the hypodermic model. All tried their west to explain this complex social network. The first to emerge was the "Two-Step Flow Model" formulated by Katz and Lazarsfeld (1955).

The most sources of data on the effects of television on achievement are an evaluation of achievement at the sixth and twelfth grades conducted by the CAP (1980), and a national survey of children 7 to 11 years of age sponsored by the Foundation for Child Development (FCD) (Zill and Peterson 1981). Both are remarkable for their scope and size, and there is considerable agreement in their results. C.A.P. and F.C.D. studies concur on major points. These are:

i) Television viewing and reading, as activities, have distinctly different relationships with scholastic achievement.

ii) The California data are superior in number of measures and extraordinary sample size.

iii) The Foundation for Child Development analyses incorporate far more variables simultaneously and thus minimize the possibility that the results are artifactual.

Mass communication research in the United States has undergone a profound transformation in the past 60 years. Some changes were the result of the rise of critical and cultural theories. There has been a resurgence of interest in developing effects theories owing in part to computerized data-collection strategies and innovations in the design of communication experiments (Bryant and Zillmann 2002; Perse 2001).

3. RESEARCH METHODOLOGY
The research strategy adopted for the study was Causal-Comparative Research, also known as ex Post-Facto Research. In this Strategy, the cause and the effect relationship is determined after the cause has already occurred rather then manipulated by the investigator. In our study the cause of the academic performance of students i.e. television viewing has already occurred. Hence, this strategy is being used.

3.1 Population

The population of the study was consisted of all the school going age children who had passed the annual examination of class V and currently studying in class VI in schools of five districts of Karachi both television viewers and non-viewers.

3.2 Sample

In the present study researcher, collected data from the stratified random sampling and cluster sampling techniques was designed and adopted. All the students, teachers and parents of the selected schools were included in the sample.

Table-1: Distribution of Students (TV Viewers) by Location

<table>
<thead>
<tr>
<th>S. #.</th>
<th>Districts</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>District Karachi Central</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>District Karachi East</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>District Karachi Malir</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>4.</td>
<td>District Karachi South</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>5.</td>
<td>District Karachi West</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Table-2: Distribution of Students (TV Non-Viewers) by Location

<table>
<thead>
<tr>
<th>S. #.</th>
<th>Districts</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>District Karachi Central</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>District Karachi East</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>District Karachi Malir</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>4.</td>
<td>District Karachi South</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>5.</td>
<td>District Karachi West</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

3.3 Description of Research Instruments

Two custom-made research instruments were developed: a questionnaire and an interview schedule. A questionnaire consisting of about 20 items were developed for the students television viewers and interview schedule with 8 broad questions to collect supplement data from the teachers and the parents. A variable of socio-economic status of students was drawn from the particulars and the additional information collected.
from the parents of the students. The two instruments were dually validated and refined above before their use. A documentary analysis was also undertaken to collect the annual examination result of the students.

### 3.4 Method / Procedure For Data Collection

The investigator personally collected the data to obtained optimum rate of return. The questionnaire was administrated personally to the respondent. In this way 100%, return was ensured. Interviews were also carried out personally so that insight could be developed into the real situation in the schools. Focus group interview was held with the selected students, teachers and parents of the schools with the investigator saving as moderator.

### 4 PLAN OF DATA ANALYSIS

The data was analyzed through descriptive statistical techniques and techniques of statistical inference. The data resulting from the questionnaire were subjected to statistical analysis involving both descriptive and inferential statistics, like charts, frequency and percentage and inferential statistics like t-test for Hypothesis and Chi-square for the frequency data followed by Levin (1994) and Walpole (1982).

### 5. DATA ANALYSIS AND SUMMARY OF THE RESULTS

There were three hypotheses of the study out of which two were accepted and one was rejected. The results of the hypothesis are given below.

**Ho1**: There was no significant difference between the academic achievements of school going age children, who viewed TV and who did not. **Accepted**

The academic achievements of students who viewed TV were more positive than who did not viewed TV.

**Ho2**: There was no significant difference between the academic achievements of school going age children, who are boys and girls, who viewed TV. **Accepted**

The academic achievements of girls who viewed TV were more positive than boys

**Ho3**: There was not a significant difference between the academic achievement of school going age children, who came from upper socio-economic level and lower socio-economic level, who viewed TV. **Rejected**

The academic achievement of students of upper socio-economic level was more positive than lower socio-economic level.

**T.V. Viewers VS Non Viewers**

*The academic achievements of television viewer students were more positive as compared to television non-viewer students, as it is an evident from this tabl-3 and a Graph.*
Table-3: Distribution of Respondents by Audience

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>PARTICULAR</th>
<th>ANNUAL RESULTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BELOW 49%</td>
<td>50% TO 69%</td>
</tr>
<tr>
<td>1</td>
<td>Viewers</td>
<td>28</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14%</td>
<td>47%</td>
</tr>
<tr>
<td>2</td>
<td>Non viewers</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20%</td>
<td>46.67%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>40</td>
<td>122</td>
</tr>
</tbody>
</table>

Graph-1

T.V Viewers Boys VS Girls

The academic achievements of females (Girls) who view television were more favorable as compared to male (Boys) who view television, as it is revealed from this table-4 and graph-2.

Table-4: Distribution of Respondents by Sex

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>PARTICULAR</th>
<th>ANNUAL RESULTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BELOW 49%</td>
<td>50% TO 69%</td>
</tr>
<tr>
<td>1</td>
<td>Viewers (M)</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19%</td>
<td>46%</td>
</tr>
<tr>
<td>2</td>
<td>Viewers (F)</td>
<td>9</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9%</td>
<td>48%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>28</td>
<td>94</td>
</tr>
</tbody>
</table>

The Impact of Television Viewing On the Academic Achievements... By Ghulam Mustafa Khan
T.V Viewers \textit{Upper Socio-Economic Level} VS \textit{Lower Socio-Economic Level}

The academic achievements of \textit{Upper Socio-Economic Level} who view television were more favorable as compared to \textit{Lower Socio-Economic Level} who views television, as it is revealed from this table and graph given below.

Table- 5: Distribution of Respondents by Socio-Economic Status

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>PARTICULAR</th>
<th>ANNUAL RESULTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BELOW 49%</td>
<td>50% TO 69%</td>
</tr>
<tr>
<td>1</td>
<td>Upper Socio-Economic Level</td>
<td>08</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8%</td>
<td>35%</td>
</tr>
<tr>
<td>2</td>
<td>Lower Socio-Economic Level</td>
<td>21</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21%</td>
<td>58%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29</td>
<td>93</td>
</tr>
</tbody>
</table>
The Impact of Television Viewing On the Academic Achievements

By Ghulam Mustafa Khan

Graph -3:

T.V Viewing of “Average number of Hours” Everyday

The students watch television for one hour to two hours every day showed more positive effect on their academic achievements than those who watch television less than one hour or do not watch.

Average Hours of TV Viewing Everyday

Table-6: Distribution of Respondents by Q.No.1

<table>
<thead>
<tr>
<th>S#</th>
<th>Q.NO.1</th>
<th>ANNUAL RESULTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BELOW 49%</td>
<td>50% TO 69%</td>
</tr>
<tr>
<td>1</td>
<td>Less Than One Hour</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.75%</td>
<td>45.28%</td>
</tr>
<tr>
<td>2</td>
<td>One to Two Hours</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.00%</td>
<td>48.43%</td>
</tr>
<tr>
<td>3</td>
<td>Two to Three Hours</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.50%</td>
<td>45.00%</td>
</tr>
<tr>
<td>4</td>
<td>Three Hours &amp; More</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.30%</td>
<td>46.50%</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>93</td>
<td>78</td>
</tr>
</tbody>
</table>
T.V viewing helps in getting good marks in School

The students who watch television did agreed that television viewing help in getting good marks in the school showed most favorable effects on their academic achievements than those who are not sure or who do not view TV at all.

Television Viewing Helps in Getting Marks in School

Table-7: Distribution of Respondents by Q.No.8

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>Q.NO.8</th>
<th>ANNUAL RESULTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BELOW 49%</td>
<td>50% TO 69%</td>
</tr>
<tr>
<td>1</td>
<td>Yes</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.51%</td>
<td>35.13%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>17</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31%</td>
<td>54%</td>
</tr>
<tr>
<td>3</td>
<td>I am not Sure</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15%</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29</td>
<td>92</td>
</tr>
</tbody>
</table>
Graph-5

T.V Viewing “Teachers & Parents Responses”

There is a close relationship between the views of the Teachers and parents. Even they are more positive and favorable on the impact of leisure-time television on the academic achievements of Students. It is evident from the data and graph given below:

Distribution of Respondents Q No. 1 to 8 of Teachers & Parents

Graph-6
5 CONCLUSION

There is a slightly positive relationship between television viewing and academic achievements of the students who view television. The children who view television managed to obtain higher grades than those who do not view.

It also found that the academic achievements of the children who view television and who were female (girls) were academically slightly better than male (Boys).

It is significant better than others that the students who were television viewers and were studying in urban areas, (private, English medium and large schools, and upper socio-economic levels) their academic achievements were comparatively better than others were.

Up to one hour to two hours per day viewing may enhance academic achievements slightly because it allows a child to have enough time for home work and other routine study. Viewing T.V. beyond two hours a day, leads child academic achievements to diminish. Additional viewing apparently has negative impact on children’s academic performances.

Over all, outcomes of the study, shows significant difference between academic achievements of school going age children who view television and who do not. It is also observe that there is no significant difference between the academic achievements of Male (Boys) and female (Girls) television viewers, only one study conducted by Morgan and Gross (1984) found significant difference between academic achievements, sexes and ability level factors.

It is also noteworthy points of the study that those children who watch television as defined prime time hours i.e. 7:00 pm to 10:00 pm performed well as far as their academic achievements are concerned. They feel themselves more confident, more active, & more energetic throughout the day. They warmly participate in most of the school & class activities as compare to those who watch television till late night.

6 RECOMMENDATIONS

The outcomes of the research study suggest some measures to be taken by different stakeholders to make finding of the study on television watching more fruitful and beneficial to our society in general and for school going age children in particular. These recommendations are listed as below:

Parents need to monitor their children TV watching habits. They should keep strict watchful eye on their children, while they sit before the TV set.

Allow their children to watch TV for maximum one to two hours every day, help them in maintaining balance between their leisure time and study time. That will help them in a long run to develop a balanced and disciplined personality.

Teachers should identify those programs of TV, which are appropriate for children; Teachers suggestions are always valid for children.

Control and correct children’s television viewing habits directly or indirectly by advising them one hour to two hours and teachers should observe them.

In Pakistan, there is acute need of program for children. Producers are need to work on this field because of non availability of children’s program they investable to watch those programs which are for adults.
Children’s program must be of children’s interest, children get attach towards them and they like to watch those programs.

It is recommended that a project of monitoring of children program on different TV channels should be launched on the pattern of Pakistan Electronic & Media Regulatory Authority (PEMRA) at federal level for upgrading the qualities of the school.

7. SCOPE FOR FURTHER RESEARCH

After an intensive fact-findings of this research study on the impact of leisure-time televising viewing on the academic achievements of 5th Class students. one feels the need for a series of field studies on the following:

- Effects of television commercial on students in Pakistan.
- An experimental study of impact of television on students of class VII to X.
- Developing healthy television viewing and academic achievement at the level of Intermediate College in Pakistan Educational Institution.

REFERENCES


Appendix-A

TESTING OF THE MAJOR HYPOTHESIS

NULL HYPOTHESIS-1: TV Viewers Vs Non-Viewers

There will be no significant difference between the academic achievements of school going children who view television and who do not view.

Analysis of the Problem
1. $H_0: \mu_1 = \mu_2$
2. $H_1: \mu_1 \neq \mu_2$
3. $\alpha = 0.05$
4. Statistical Test: $t = 1.96$
5. Formula: $t = \frac{\bar{x}_1 - \bar{x}_2}{SE\bar{x}}$
6. Decision Rule: Reject $H_0$ if computed to $\geq$
7. Conclusion: See computation at the end

| Table-8: Application of t-Test for testing the Null Hypothesis 1 |
|-------------------|-------------------|
| Step 0: Tabulation of Data | |
| Group-1           | Group-2           |
| Television Viewers| Television Viewers|
| $\bar{x}_1$       | $\bar{x}_2$       |
| 96                | 98                |
| 53                | 50                |
| 63                | 85                |
|                | -                 |
|                | -                 |
|                | -                 |
|                | -                 |
|                | -                 |
|                | -                 |
|                | -                 |
| 59                | 50                |
| 88                | 76                |
| 61                | 50                |
| $\Sigma x_1$      | 13155             |
| $N_1$ = 200       | 3805              |
| $\Sigma x_2^2$    | 905213            |
| $\Sigma x_2$      | 253819            |
| $s_1 = 14.10$     | 63.41             |

Step 1: Find the means of the two groups.

$x_1 = \frac{\Sigma x_1}{N_1} = \frac{13155}{200} = 65.77$
\[
\bar{x}_2 = \frac{\sum x_2}{N_2} = \frac{3805}{60} = 63.41
\]

Step 2: Find the standard deviation of the two groups.

\[
S_1 = \sqrt{\frac{\sum x_1^2 - \left(\frac{\sum x_1}{N_1}\right)^2}{N_1-1}} = \sqrt{\frac{905213 - \left(13155\right)^2}{200 - 1}} = \sqrt{200.71} = 14.16
\]

\[
S_2 = \sqrt{\frac{\sum x_2^2 - \left(\frac{\sum x_2}{N_2}\right)^2}{N_2-1}} = \sqrt{\frac{253819 - \left(3805\right)^2}{60 - 1}} = \sqrt{212.17} = 14.56
\]

Step 3: Find the standard error of the two means.

\[
SE_{\bar{x}_1} = \frac{S_1}{\sqrt{N_1}} = \frac{14.16}{\sqrt{200}} = 1.00
\]

\[
SE_{\bar{x}_2} = \frac{S_2}{\sqrt{N_2}} = \frac{14.56}{\sqrt{60}} = 1.88
\]

Step 4: Find the standard errors of the difference between the two means.

\[
SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{(SE_{\bar{x}_1})^2 + (SE_{\bar{x}_2})^2} = \sqrt{1.00^2 + 1.88^2} = \sqrt{4.53} = 2.12
\]

Step 5: Find the degree of freedom.

\[
df = (N_1 - 1) + (N_2 - 1) = (200 - 1) + (60 - 1) = 258
\]

Step 6: Apply the t test

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{SE_{\bar{x}_1 - \bar{x}_2}} = \frac{65.77 - 63.41}{2.12} = \frac{2.36}{2.12} = 1.11
\]

Step 7: Draw the conclusion.

Referring to the table t, we find that the tabulated value of \( t = 1.96 \) at \( \alpha = 0.05 \) is more than the computed value of \( t = 1.11 \). Therefore, the null hypothesis (H0) is upheld and it is concluded that there is no significant difference between the academic achievements of School going children (who view Television and who do not view).

NULL HYPOTHESIS-2: (Male (Boys) Vs Female (Girls))

There will be no significant difference between the academic achievements of school going boys and girls who view television.
Analysis of the Problem

1. \( H_0 : \mu_1 = \mu_2 \)
2. \( H_1 : \mu_1 \neq \mu_2 \)
3. \( \alpha = 0.05 \)
4. Statistical Test = \( t = 1.96 \)
5. Formula = \( t = \frac{\bar{x}_1 - \bar{x}_2}{SE_{\bar{x}_1 - \bar{x}_2}} \)
6. Decision Rule = Reject \( H_0 \) if computed to \( \geq \)
7. Conclusion : See computation at the end

Table-9: Application of t-Test for testing the Null Hypothesis 2

<table>
<thead>
<tr>
<th>Step 0: Tabulation of Data</th>
<th>Group-1</th>
<th>Group-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>( x_1 )</td>
<td>( x_2 )</td>
<td>( x_1 )</td>
</tr>
<tr>
<td>96</td>
<td>92</td>
<td>53</td>
</tr>
<tr>
<td>63</td>
<td>67</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>77</td>
<td>59</td>
<td>88</td>
</tr>
<tr>
<td>58</td>
<td>61</td>
<td>( \sum x = 6427 )</td>
</tr>
<tr>
<td>( N = 100 )</td>
<td>( N = 100 )</td>
<td></td>
</tr>
<tr>
<td>( \sum x^2 = 437787 )</td>
<td>( \sum x^2 = 467426 )</td>
<td></td>
</tr>
<tr>
<td>( \bar{x} = 64.27 )</td>
<td>( \bar{x} = 67.28 )</td>
<td></td>
</tr>
<tr>
<td>( S_1 = 15.80 )</td>
<td>( S_1 = 12.21 )</td>
<td></td>
</tr>
</tbody>
</table>

Step 1: Find the means of the two groups.

\[ \bar{x}_1 = \frac{\sum x_1}{N_1} = \frac{6427}{100} = 64.27 \]
\[ \bar{x}_2 = \frac{\sum x_2}{N_2} = \frac{6728}{100} = 67.28 \]

Step 2: Find the standard Deviation of the two groups.

\[ S_1 = \sqrt{\frac{\sum x_1^2 - \left( \frac{\sum x_1}{N_1} \right)^2}{N_1 - 1}} = \sqrt{\frac{437787 - \left(6427\right)^2}{100 - 1}} = \sqrt{249.73} = 15.80 \]

\[ S_2 = \sqrt{\frac{\sum x_2^2 - \left( \frac{\sum x_2}{N_2} \right)^2}{N_2 - 1}} = \sqrt{\frac{467426 - \left(6728\right)^2}{100 - 1}} = \sqrt{204.85} = 12.21 \]
Step 3: Find the standard Error of the two means.

\[ SE_1 = \frac{S_1}{\sqrt{N_1}} = \frac{15.80}{\sqrt{100}} = 1.58 \]
\[ SE_2 = \frac{S_2}{\sqrt{N_2}} = \frac{12.21}{\sqrt{100}} = 1.22 \]

Step 4: Find the standard Errors of the difference between the two means.

\[ SE_{x_1-x_2} = \sqrt{(SE_{x_1})^2 + (SE_{x_2})^2} = \sqrt{(1.58)^2 + (1.22)^2} = \sqrt{3.97} = 1.99 \]

Step 5: Find the degree of freedom.
\[ df = (N_1 - 1) + (N_2 - 1) = (100 - 1) + (100 - 1) = 198 \]

Step 6: Apply the t test
\[ t = \frac{x_1 - x_2}{SE_{x_1-x_2}} = \frac{64.27 - 67.28}{1.99} = \frac{3.01}{1.99} = 1.51 \]

Step 7: Draw the Conclusion.

Referring to the table t, we find that the tabulated value of t = 1.96 at α = 0.05 is more than the computed value of t = 1.51. Therefore, the null Hypothesis (H_0) is upheld and it is concluded that there is no significant difference between the academic achievements of School going boys and girls who view Television.

**NULL HYPOTHESIS-3: (Upper Socio-Economic Level VS Lower Socio-Economic Level)**

There will be no significant difference between the academic achievements of school going children who come from Upper Social-Economic level and Lower Social-Economic level.

**Analysis of the Problem**

1. H_0 : \( \mu_1 = \mu_2 \)
2. H_1 : \( \mu_1 \neq \mu_2 \)
3. \( \alpha = 0.05 \)
4. Statistical Test = t = 1.96
5. Formula = \( t = \frac{\bar{x}_1 - \bar{x}_2}{SE_{\bar{x}_1 - \bar{x}_2}} \)
6. Decision Rule = Reject H_0 if computed to ≥
7. Conclusion : See computation at the end
Table-10: Application of t-Test for testing the Null Hypothesis

Step 0: Tabulation of Data

<table>
<thead>
<tr>
<th></th>
<th>Group-1</th>
<th>Group-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper Level</td>
<td>Lower Level</td>
</tr>
<tr>
<td>$x_1$</td>
<td>96</td>
<td>60</td>
</tr>
<tr>
<td>53</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>63</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td>-</td>
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<tr>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>77</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>66</td>
<td></td>
<td>88</td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>

| $\Sigma x_1$ | 7116 | 6039 |
| $N_1$ | 100 | 100 |
| $\Sigma x_1^2$ | 523218 | 381995 |
| $\bar{x}_1$ | 71.16 | 60.39 |
| $S_{1}$ | 13.04 | 13.21 |

Step 1: Find the means of the two groups.

$$\bar{x}_1 = \frac{\Sigma x_1}{N_1} = \frac{7116}{100} = 71.16$$

$$\bar{x}_2 = \frac{\Sigma x_2}{N_2} = \frac{6039}{100} = 60.39$$

Step 2: Find the standard Deviation of the two groups.

$$S_1 = \sqrt{\frac{\Sigma x_1^2 - (\frac{\Sigma x_1}{N_1})^2}{N_1-1}} = \sqrt{\frac{523218 - (\frac{7116}{100})^2}{100-1}} = \sqrt{170.13} = 13.04$$

$$S_2 = \sqrt{\frac{\Sigma x_2^2 - (\frac{\Sigma x_2}{N_2})^2}{N_2-1}} = \sqrt{\frac{381995 - (\frac{6039}{100})^2}{100-1}} = \sqrt{174.74} = 13.21$$

Step 3: Find the standard Error of the two means.
Step 4: Find the standard Errors of the difference between the two means.

\[
SE_{x_1 - x_2} = \sqrt{(SE_{x_1})^2 + (SE_{x_2})^2} = \sqrt{(1.30)^2 + (1.32)^2} = 3.43
\]

Step 5: Find the degree of freedom.

\[
df = (N_1 - 1) + (N_2 - 1) = (100 - 1) + (100 - 1) = 198
\]

Step 6: Apply the t test.

\[
t = \frac{x_1 - x_2}{SE_{x_1 - x_2}} = \frac{71.16 - 60.39}{3.43} = 5.82
\]

Step 7: Draw the Conclusion.

Referring to the table t, we find that the tabulated value of t = 1.96 at \( \alpha = 0.05 \) is less than the computed value of t = 5.82. Therefore, the null hypothesis (H0) is rejected and it is concluded that there is a significant difference between the academic achievements of School going children who come from upper social economic levels and Lower social economic level who view television.

Questions to the Respondents

Part A: Students (i) Television Viewers

Table-11: shows the distribution of the respondents by Q. No. 1

Q.No.1 How many hours on the average do you watch TELEVISION everyday? (Check one)

- a) Less than one hour
- b) One hour to two hours
- c) Two hours to three hours
- d) Three hours to more

TABLE-11: Distribution of Respondents by Question No. 1

<table>
<thead>
<tr>
<th>S NO.</th>
<th>Q. NO. 1</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Less than one hour</td>
<td>53</td>
<td>26.5%</td>
</tr>
</tbody>
</table>
b) One hour to two hours | 64 | 32%

- c) Two hours to three hours | 40 | 20%
- d) Three hours and more | 43 | 21.5%

| Total | 200 | 100% |

It is clear from the above table the percentage (32%) of one hour to two hours respondents is more than the percentage (26.5%) of less than one hour counterparts.

**Item No: 1**

**The case of average number of hours of television viewing everyday.**

Table-12: Shows the application of chi-square ($X^2$) to the responses of the students by question No. 1.

**Table-12:** Application of Chi-Square ($X^2$) for Testing the Significant on Item No: 1

<table>
<thead>
<tr>
<th>Statistical Formula</th>
<th>Responses of the Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 1</td>
<td>a</td>
</tr>
<tr>
<td>Step 1 $f_o = $</td>
<td>53</td>
</tr>
<tr>
<td>Step 2 $f_e = $</td>
<td>50</td>
</tr>
<tr>
<td>Step 3 $f_o - f_e = $</td>
<td>03</td>
</tr>
<tr>
<td>Step 4 $(f_o - f_e)^2$</td>
<td>9</td>
</tr>
<tr>
<td>Step 5 $x^2 = \frac{(f_o - f_e)^2}{f_e}$</td>
<td>9</td>
</tr>
<tr>
<td>Step 6 $x^2 = \sum \frac{(f_o - f_e)^2}{f_e}$</td>
<td>+0.18</td>
</tr>
<tr>
<td>Step 7 $x^2$</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion:**

Referring to table of ($X^2$), we find that at $\alpha = 0.05$ with $df = 3$, the tabulated value of ($X^2$) = 7.81 is more than the calculated value of ($X^2$) 7.08.

It is therefore, concluded that there is a significant trend of opinion among the students of the five districts of Karachi toward the average number of hours of television viewing every day.

By the inspection of the table, it is an evidence that most of the 32% viewing television from one hour to two hours.

**Table-10:** Shows the distribution of the respondents by Q. No. 8

**Q.No. 2 Do you think that you watching TELEVISION helps you in getting good marks in your school? (Check one).**
TABLE-13: Distribution of Respondents by Q. No. 8

<table>
<thead>
<tr>
<th>S NO.</th>
<th>Q. NO. 8</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Yes</td>
<td>48</td>
<td>24%</td>
</tr>
<tr>
<td>b)</td>
<td>No</td>
<td>130</td>
<td>65%</td>
</tr>
<tr>
<td>c)</td>
<td>I am not sure</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

It is clear from the above Table the percentage (65%) of “No” respondents is more than the percentage (24%) of “Yes” counterparts.

**Item No: 2**
The case of watching television help in getting good works in school.

Table 13 shows the application of chi-square ($x^2$) to the responses of the Students by Question No. 8.

Table-13: Application of Chi-Square ($x^2$) for Testing the Significant on Item No: 8

<table>
<thead>
<tr>
<th>Statistical Formula</th>
<th>Responses of the Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.8</td>
<td>a</td>
</tr>
<tr>
<td>Step 1 $f_o =$</td>
<td></td>
</tr>
<tr>
<td>Step 2 $f_e =$</td>
<td>66.667</td>
</tr>
<tr>
<td>Step 3 $f_o - f_e =$</td>
<td>-18.667</td>
</tr>
<tr>
<td>Step 4 $(f_o - f_e)^2$</td>
<td>348.456</td>
</tr>
<tr>
<td>Step 5 $x^2 = \frac{(f_o - f_e)^2}{f_e}$</td>
<td>348.456</td>
</tr>
<tr>
<td>Step 6 $x^2 = \frac{(f_o - f_e)^2}{f_e}$</td>
<td>5.226</td>
</tr>
<tr>
<td>Step 7 $x^2$</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>(K - 1)</td>
</tr>
</tbody>
</table>

**Conclusion:**
Referring to table of ($x^2$), we find that at $\alpha = 0.05$ with df = 2 the tabulated value of ($x^2$) = 5.991 is less then the calculated value of ($x^2$) = 95.317.

It is therefore, concluded that there is a significant trend of opinion among the Students of the five districts of Karachi toward the watching television help in getting good grades in school.

By the inspection of the table, it is evidence that most of the Students 65%. Agree that watching television help in getting good marks in school.

Appendix-B

*The Impact of Television Viewing On the Academic Achievements*...59

*By Ghulam Mustafa Khan*
A Topic of the Thesis of Ph.D. in Mass Communication

"The Impact of Leisure-Time Television On the Academic Achievements of 5th Class Students"

Advisor: Prof. Dr. Azhar Rizvi
Fellow: Ghulam Mustafa Khan

QUESTIONNAIRE: 1

Section-I: Particulars About the Respondent
(A) - Students (TELEVISION Viewers)

1. Name: (Optional)
2. Father's Name:
3. Sex: [ ] Male [ ] Female
4. Age:
5. Class:
6. School Name:
   & Address with Telephone (if any):

STUDENT'S ACADEMIC RECORD

<table>
<thead>
<tr>
<th>Annual Examination</th>
<th>Year of Passing</th>
<th>Marks Obtained</th>
<th>Max. Marks</th>
<th>Grade</th>
<th>% age</th>
<th>General Knowledge</th>
<th>Conduct</th>
<th>Attendance</th>
<th>Remarks</th>
</tr>
</thead>
</table>

Copy of the student's annual report card is also enclosed.

Section-II:

QUESTIONS TO RESPONDENT

A - STUDENTS (TELEVISION VIEWERS)

Q.No.1. How many hours on the average do you watch TELEVISION everyday? (Check one)
   (a) Less than one hour
   (b) One hour to two hours
   (c) Two hours to three hours
   (d) Three hours and more
Q.No.2. At what time do you watch TELEVISION? (Check one or more)
(a) Morning (Before 12:00 noon) 
(b) Afternoon (12:00 noon to 5:00 pm) 
(c) Evening (5:00 pm to 7:00 pm) 
(d) Early Night (7:00 pm to 10:00 pm) 
(e) Late Night (10:00 pm & beyond) 

Q.No.3. What programs do you watch on TELEVISION? (Check one or more)
(a) Religious Programs 
(b) News & Current Affairs 
(c) Literary Programs 
(d) Quiz & Competitions 
(e) Documentary Films (English / Urdu) 
(f) Drama (English / Urdu) 
(g) Feature Films (English / Urdu) 
(h) Music Programs & Slage Show 
(i) Comedy & Short Plays 
(j) Children Programs / Cartoons 
(k) Sports 
(l) Advertisements & Commercials (English / Urdu) 
(m) Any other (please specify) 

Q.No.4. Among the TELEVISION programs listed above what program do you like best?
Name of Program: ____________________________

Q.No.5. How much time do you devote on the average in your Home work assigned by school/ tuition every day?
Hours ____________________________

Q.No.6. Do you watch TELEVISION for the following reasons (Check one or more):
(a) For entertainment 
(b) For Information 
(c) For Education 
(d) For specific Knowledge 
(e) For general knowledge. 
(f) For keeping company with parents/guardians & friends 
(g) For gaining prestige in the community 
(h) Any other (Please specify) 

Q.No.7. Do you think that your parents/guardians like your watching TELEVISION. (Check one)
(a) If yes [ ], why? ____________________________
(b) If not [ ], why not? ____________________________

Q.No.8. Do you think that your watching TELEVISION helps you in getting good marks in your school. (Check one)
(a) Yes 
(b) No 
(c) I am not sure. 

Q.No.9. Do you hate to watch any program on TELEVISION? If so, 
(a) Name the program: ____________________________
(b) Why do you hate it? ____________________________
Q.No. 10. Do you feel that the TELEVISION program you watch reflects reality? If so what reality does it reflect (check one or more).
(a) Family affairs
(b) Community culture
(c) Political matters
(d) International happenings

Q.No. 11. After watching a TELEVISION program do you discuss its strength and weaknesses with your parents / guardians and family members.
   Yes   No

Q.No. 12. Do you have some suggestions for the improvement of TELEVISION programs.
   If Yes (List the main suggestions)
   (i) ____________________________

Q.No. 13. In your practical life do you ever apply the lesson or the principles learned in the TELEVISION program.
   Yes   No

Q.No. 14. Do you ever use your experience of TELEVISION watching in your school work.
   If Yes   (Give one examples)
   (i) ____________________________

Q.No. 15. Do you ever discuss a TELEVISION program with your teacher? If so, what is reaction of your teacher.
   (a) Favourable
   (b) Unfavourable

Q.No. 16. Do you ever invite the friends to watch TELEVISION with you at your home.
   Yes   No

Q.No. 17. Does any of your friend invite you to watch TELEVISION at his or her home.
   Yes   No

Q.No. 18. Do you like to watch TELEVISION programs more or less than at present.
   (a) If more, why?
   (b) If less, why?

Q.No. 19. If you are asked not to watch TELEVISION program. Do you think that you can improve your grade in the school by following this suggestion.
   Yes   No

Q.No. 20. Do you believe that children who watching TELEVISION programs receive better grades in school than those who do not.
   Yes   No
Section-I: Particulars About the Respondent
(B) - TEACHERS

(1) Name (s): (Optional)

(2) Sex: [ ] Male [ ] Female

(3) Age Group: [ ] Below 40 years [ ] 40 years and above

(4) Education:

(5) Experience:

(6) Address: (Home with Tel No.)

Office with Tel No.

Section: II

QUESTIONS TO RESPONDENT
(B) - TEACHERS

Q.No. 1. Do you like to see that your students watching TELEVISION? (Check one)
   (a) If yes [ ] , why?
   (b) If not [ ] , why not?

Q.No. 2. In your opinion how many hours on the average do a students watch TELEVISION every day? (Check one)
   (a) Less than one hour [ ]
   (b) One hour to two hours [ ]
   (c) Two hours to three hours [ ]
   (d) Three hours and more [ ]

Q.No. 3. Do your students insist that they should be allowed to watch TELEVISION program? (Check one or more)
   (a) Yes [ ]
   (b) No [ ]

Q.No. 4. Do you ever stopped your students from TELEVISION watching. If so, what is the reaction of your students? (Check one)
   (a) Favourable [ ]
   (b) Unfavourable [ ]

Q.No. 5. How do you react when your students watching TELEVISION? (Check one)
   (a) Positively [ ]
   (b) Negatively [ ]

Q.No. 6. Do you think that when your students watching TELEVISION they improve their academic achievement in the school? (Check one or more)
   (a) Yes [ ]
   (b) No [ ]
   (c) I am not sure [ ]

Q.No. 7. In your opinion what is the effect of TELEVISION watching on your students? (Check one)
   (a) Favourable [ ]
   (b) Unfavourable [ ]

Q.No. 8. Do you have some suggestions for your students' TELEVISION watching? (Check one)
   (List the main suggestions)