

## IMPACT ASSESSMENT OF TECHNOLOGY USE TOWARDS THE AGGRESSION AND ANGER IN ADOLESCENTS

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**Abstract:** Individuals' communication values through using technology have changed substantially. While communication has simplified through technology, this convenience has brought in a lot of negativity. Today's technological tools as mobile phone, internet, computer and telephone has been involved in human life at very early ages, and this has affected people without them knowing. They considered such use of technological communication tools so naturally and, it has caused them to perceive as a part of their life and culture.

It is considered that the technology's negative effects on individuals' behaviour like anger and aggression causes the emergence of other problems. For this purpose, "Assessment of Technology's Effects on Adolescent Aggression and Anger" is intended for this study, which was applied to determine the opinions of students.

The population involved total 215 students studying during 2013-2014 and 2014-2015 academic year in a public school Lefkoşa Türk Lisesi and a private school Near East College in TRNC, Nicosia.

The survey was carried out in order to create a situation assessment about whether the use of technology on adolescents is effective on behaviour like anger and aggression. This research is a "Relational Scan" model that is located within the general screening models. It also is a descriptive study.

Whether the factors affecting the use of technology, which was attempted to determine with quantitative research models used change according to the demographic characteristics of students were examined in this study. With this aspect, this research can also be called Comparative Case Study. For quantitative data obtained from the analysis of data collected by survey and scale, SPSS 16 software was used and correlation, T\_ test and F test statistics were used. In the analysis, the significance level was taken as  $p < 0.5$ .

According to the obtained data, students' use of technological tools affects anger and aggression. There is a significant difference between students' gender and their use of technological tools. Also the use of technological tools is higher among the female students than male students.

**Keywords:** Technology, adolescent, anger and aggression.

### INTRODUCTION

Discussions and researches on the effects of technology on society have begun in recent years. Based on these researches, *"despite the close attention to the large-scale impact of the developments, how it may affect our immediate environment is not considered too much. At the entrance of the new technology to our homes, business places and living spaces, it is perfectly normal that some significant changes start to emerge in attitudes and behaviour"* (Naisbitt, 2004; Quotation:Bešli, 2007).

Many scientists refer to the period in which we live as the century of communication and technology (Erdemir, 2012). The developing technology in accordance with the requirements of the era has led to changes in human life. Communication is also affected significantly by changes occurring within a short time and, accordingly, mass communication devices have become indispensable in daily life. People became aware of the world through these devices and they can no longer live without them. Therefore, the mass media devices such as mobile phone, television, newspapers, the Internet is thought to influence negative actions in children and adolescents (Ülkü, 2013).

Today, many children and adolescents, has its own technological tools such as mobile phones and the internet and most of the time they provide communication through the internet. The replacement of face-to-face communication with the social networks has led to isolation of individual social relationships deteriorate over time. As a phenomenon that occurs in the process, communication is generally a social and particularly personal interaction. Individuals can socialize with communication. With the emergence of modern technology means of communication as a result of technological developments, changes began to occur in the communication process. Since interpersonal communication made through these tools, affection is inevitable. Mobile phones, televisions and computers are the most common means of communication used and they lead to the formation of interpersonal communication limitations (Özaydın, 2010).

Anger and aggression induced events in the living and working environments encountered and multiplied over time and it has become one of the significant problems of our age. In recent years, especially violent behaviour in schools, has increased remarkably (Yavuzer and Üre 2010). Anger and aggression are the feelings and behaviours that affect the development of the adolescent individuals and they profoundly affect the lives of individuals. Therefore, individuals should acknowledge, accept and easily talk about their anger and its negative results just as any other emotion and thoughts (Öz, 2005). Yavuzer (1992) and Kulaksızoğlu (2004) have stated that; anger and aggression is mostly encountered in adolescents and behaviour disorder and crime as a result of these emotions and behaviours, are observed most in this period. In addition, increased physical strength during adolescence and getting pleasure from the violence associated with the environment.

"Social networking is a type of online communication which is popular among adolescents"(Subrahmanyam, Reich, Waechter and Espinoza, 2008). The internet, which is becoming more useful day by day on obtaining information and using it and the accompanying social sharing networks, caused changes on well-established features of life and as well as the way individuals interact with one another while providing a comprehensive socialization among children and adolescents. (Subrahmanyam and Greenfield, 2008; Özmen, Aküzüm, Sünkür and Baysal, 2011).

Yağcı Gerçel (2009) reviewed the relationship between type and frequency of computer use among adolescents and anger and aggression levels in his study. As a result of the study, a statistically significant difference was not determined for anger and aggression between adolescents who play and do not play computer games and adolescents who play computer games in different places. Also, it has been determined that there is a significant difference between anger and aggression, and weekly hours of computer use by adolescents. According to the LSD test results, it was found that there is a significant difference between adolescents who use the computer for 4-7 hours and who use 16-19 hours and it was also found that there is a significant difference between adolescents who use the computer for 8-11 hours and who use 16-19 hours.

Dolu, Bükler and Uludağ (2010) investigated the effects of violent video games on children and teenagers. According to the results of the study, it was found that particularly the violent visual media publications, attitudes of society against violence and the individuals' violent, aggressive and criminal attitudes and behaviours are all positively related.

Altınay's (2013), research named "The relationship between Internet and Computer Use and Aggression Among High School Students" has examined the relationship between internet and computer use and aggression among high school students. The population involved the students studying during 2011-2012 academic year in the secondary and high schools in the city centre of Isparta. Secondary schools located in Isparta province were classified according to the socioeconomic status of the neighbourhood and the information received from the provincial Department of Education. Among these schools, high schools with different socioeconomic status were determined through easy accessible way of sample selection. This study involved a total of 285 volunteer students; 126 male and 159 female. To collect data in the study "Aggressiveness Scale" is used. According to the results, there is a significant difference between the aggression scores of the students who stated that they use computer games and the Internet regularly and their genders. Males' scores are much higher. According to the results of their purpose of using the internet, it was found that there is a significant difference between their aggression levels. It was found that there is a significant difference between the choice of game genre (war and strategy) and their level of aggression. There is a significant difference between students who play violent games and their level of aggression.

According to the results of many different researches carried out by different people other than researchers, the media, especially television, are effective in some undesired actions. As a result of watching television for three or more hours long, the attention span reduces and children fail to fulfil required tasks and instead develop increasingly growing desire to have fun (Web et.al., 1992).

While the events caused by anger and aggression have increased at homes, workplaces and schools, they have become one of the most important issues of the 21st century and violence, particularly in schools has increased in recent years. For all these reasons, it can be concluded that anger and aggression is an emotion and an attitude that should be taken under control in a way that will contribute to the development of individuals in adolescence that is the reorganization of personality. Individuals must acknowledge and accept anger and also have the ability to express anger in a healthy way (Öz, 2005). Uncontrollable anger and aggressive behaviour, often negatively affect the lives of adolescent individuals and it causes the formation of new problems besides existing problems (Saydanoğlu, 2011).

## **METHOD**

Quantitative research methods were used in this research. This research is a "Relational Scan" model that is located within the general screening models. It also is a descriptive study. "Assessment of Technology's Effects on Adolescent Aggression and Anger" is intended for this study, which was applied to determine the opinions of students. The survey was carried out in order to create a situation assessment about whether the use of technology on adolescents is effective on behaviour like anger and aggression. Whether the factors affecting the use of technology, which was attempted to determine with quantitative research models change according to the demographic characteristics of students were examined in this study. With this aspect, this research can also be called Comparative Case Study. The survey that is used in this study to apply students is a Likert questionnaire type with 5 scale and includes a first section where the demographic structures of the students are measured, the second section where there is the students' use of technology and the third section that contains the statements developed to measure students' anger and aggression levels.

### **Working Group**

This study was applied to the population that involved randomly chosen total 215 students studying in 9<sup>th</sup> and 10<sup>th</sup> grades during 2013-2014 and 2014-2015 academic year in a public school Lefkoşa Türk Lisesi and a private school Near East College in TRNC, Nicosia.

### **Data Collection Tools**

In the study "About the Use of Technological Tools" and "Anger and Aggression" scale is used on the students as a data collection tool to assess the impact of the use of technology on adolescent aggression and anger.

### **The Student Scale "About the Use of Technological Tools":**

Developed by Arnavut (2013) and used to perform validity and reliability studies, this scale was applied to the students. 93 articles were prepared by Arnavut (2013) to perform validity and reliability analysis on the scale. As result of the factor analysis, fifteen unsuitable expressions were excluded from the scope. To reveal the main components (subscales) of the scale, Principal Component Factor Analysis and Varimax Rotation were applied. As a result of factor analysis, five dimensions were emerged. Scale was structured as a five-factor and the articles of the factors were organized in terms of their content and structure as "View on Technological Tools" (24 articles), "Social Media" (12 articles), "the place of technology in the Life" (8 articles), "educational use" (9 articles), "Communication" (7 articles).

### **"Anger and Aggression" Survey:**

A data collection tool used to measure the levels of anger adolescents in the study, "State-Trait Anger Expression Scale" is used which was developed under the name "Trait Anger Expression Scale" by Spielberger and his friends (1988). In the stage of validity and reliability of measurement tools, expert opinion has been taken. The scale has 34 Likert statements. Each item contained in these articles was expressed in the form of four scales as "Completely (4)", "Pretty (3)", "a little (2)", "No (1)". The resulting data are coded by giving a value from 4 to 1.

The obtained Cronbach's alpha values were calculated separately. These were found to be: 79 for Continuous anger size, 84 for Controlled anger size, 78 for showing anger size and 62 for suppressed anger size (Savaşır and Şahin, 1997).

### **Data Collection Process**

In the process of collecting the data, students from a public school Lefkoşa Türk Lisesi and a private school Near East College were interviewed. The surveys applied to the students in this research, were held in accordance with the timetables that were agreed with the school administration and teachers after obtaining the necessary permits from the principals and the Ministry of Education and consulting with school management and teachers. The study data was collected during the fall of the 2013-2014 school year.

### **Data Collection Analysis**

For quantitative data obtained from the analysis of data collected by survey and scale, SPSS 16 software was used and correlation, T<sub>1</sub> test and F test statistics were used. In the analysis, the significance level was taken as  $p < 0.5$ .

In explaining the analysis results, averages calculated for each sub scales were considered to be students' anger and aggression levels. Students' average of anger and aggression has taken place in the options below.

In the study arithmetic average ( $\bar{X}$ ), standard deviation (s), the lowest and highest values were used on the analysis of the data collected to answer sub-objectives.

**Table 1: Score Limits of Five Grade Scale**

Significance	Limits	Perception-Opinion
1	1.00-1.79	Strongly disagree
2	1.80-2.59	disagree
3	2.60- 3.39	undecided
4	3.40 -4.19	agree
5	4.20- 5.00	strongly agree

The average scores of all students in anger and aggression scale are calculated as shown in Table 1.

To test whether there is significance between the levels of anger and aggression, a t-test was performed and to analyse the differences or similarities between 3 or more groups ANOVA was used. If there were any significance among the variables, then the Post-Hoc LSD test was used.

In the measuring of the students’ anger and aggression the average points have been calculated.

**Results**

In this section, the data obtained by the achieved results of the data analysis through data collection tools and the opinions of the participants were given in all sizes.

**Results and Comments on the First Sub Problem**

The first sub problem of the study was indicated, as “*Is there a significant difference between students’ gender and their use of technological tools?*”

**Table 2: Genders and technological tool use of students**

Gender	N	X	S	sd	t	P	P < 0.05 Means
Female	94	2.96	1.06	213	2.781	.006	Significant
Male	121	2.53	1.19				

In table 2, it was examined through the t-test analysis, whether there is a significant difference between students' gender and their use of technological tools. It was found that female students’ average view on the use of technological tools is (=2.94) and male students’ is (=2.53). As shown in the table above, there is a statistically significant difference between female and male students’ use of technological tools. . Also the use of technological tools is higher among the female students than male students. Altınay et.al (2013) obtained a similar result in their studies and they found that the use of technological tools is higher among the female students than male students.

**Results and Comments on the Second Sub Problem**

The second sub problem is “What are the students’ opinions on the use of technological tools?”. The views of the surveyed students were examined and average scores were calculated on the following table.

**Table 3: Students' opinions on the use of technological tools**

Total	N	Min.	Max.	Std. Deviation
	215	1,00	5,00	2,72

The average of the students' opinions on the use of technological tools were stated as indecisive (=2.72). It can be concluded that the students couldn't provide proper opinions due to their lack of information about the use of technological tools. It is thought it was difficult for individuals who have inadequate information about technology to provide an opinion about its advantages or disadvantages. The reason of a student's undesirable behaviour could be the lack of information and this problem can be solved with the help of a teacher (Çelik, 2002; Öztürk, 2002; Özdemir, 2004).

### Conclusion and Recommendations

In this section, review results are described based on the findings provided in the research process and proposals are given based on these results.

There is a significant difference between students' gender and their use of technological tools. According to the data, female students use more technological tools than male students. In a similar research of Altınay et.al (2013) named "*the relationship between the High School Students' Internet and Computer Use and Aggression*" have found a significant difference between aggression scores and genders of students who indicate that using computer games and the internet on a regular basis. It was found that the ratio is higher for male students. It was determined that the gender is an effective factor in the use of technological tools.

The average range of students' views on the use of technological tools is stated as indecisive. It can be concluded that the students couldn't provide proper opinions due to their lack of information about the use of technological tools. It is thought it was difficult for individuals who have inadequate information about technology to provide an opinion about its advantages or disadvantages.

This study indicates the reasons and opinions for anger and aggression among adolescents due to the use of technology. The findings of study as "*Does the average duration of daily use of technological tools affect the anger aggression behaviours of students?*" and "*Does the use of technological tools have an impact on the anger and aggression among students?*" are being analyzed.

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