# Education Administrators' Evaluation of Precautionary Measures Taken Against Technology-Based Anger and Aggression in Students

Emete Gerçel
Near East University, N.CYPRUS

Gökmen Dağlı
Near East University, N.CYPRUS

**ABSTRACT**

Technology is thought to affect people's behaviors and trigger feelings of anger and aggression, which in turn manifest into other problems. It is more important to develop strategies in order to avoid these behavioral problems than to concentrate on the anger and aggression demonstrated by individuals. This study aimed to develop strategies to help education administrators prevent the anger and aggression caused by the use of technology by students. In this qualitative study, a semi-structured interview form was prepared. By responding to the questions, the education administrators were able to put forth their views about the rage and aggression caused by the use of technology by the students, the preventions taken to minimize this effect, and the effectiveness of these preventions.

**Keywords:** anger, aggression, education administrators, precautionary measures, technology

## INTRODUCTION

Starting from the second half of the 20th century, great changes in computer technologies have affected the process of production and management. New social structures such as Drucker's (1999) "knowledge worker," Zbigniew Brezezinski's (1970) "technetronic era," Martin's (1996) "information society," and Köksal's (1999) "informatics society" were established and are still valid today.

The cultural shift stemming from technological advancements has had a fundamental impact on life. The advancement in technology has made life easier. It satisfies the needs of those using it and affects the development of society. The means of communication, the way work is conducted, the concepts used, and the perception of what is happening have all significantly changed in this life style.

**Correspondence:** Emete Gerçel, *Near East University, Nicosia, N.Cyprus.*
✉ emetey@hotmail.com

**State of the literature**

- Children who grow up in unstructured families and who do not get enough attention from their parents tend to be predisposed to displaying signs of aggression. These individuals tend to be more prone to the negative effects of technology.
- There has been a significant increase in acts of violent behavior, especially in schools
- This study aimed to develop strategies to help education administrators prevent the anger and aggression caused by the use of technology of students

**Contribution of this paper to the literature**

- Private school administrators indicated that they did not experience any problems with technology addiction among students at school, whereas state school administrators reported that 38.8% of their students displayed signs of anger and aggression stemming from technology.
- None of the parents who sent their children to private schools showed any interest in participating to prevent the negative outcomes of technology, and only a few parents with children in state schools participated.
- This signals that there is no collaboration between institutions and parents when implementing these countermeasures.

While making communication much easier, technology has had some negative consequences as well. Technology affects an individual's social relations negatively; thus, technology can lead to isolation. The debate on the effect technology has had on society and social interactions has arisen in the last few years. Naisbitt (2004) claims that while using technology, an individual's values of interaction with those around them alter to a great degree:

> *Unlike the effects of technology on broad external scale, there has not been much consideration about the effects of technology on the immediate, internal environment. It is quite normal that there is a significant change in our behavior and outlook as each new technological device enters our private homes, places of employment and other areas of our lives.*

"*Social networking sites are one of the online communication types that are popular among the adolescents*" (Subrahmanyam, Reich, Waechter & Espinoza, 2008, p. 122). The internet, and associated social networking sites, which become interestingly practical in the acquisition and use of information, has created comprehensive socialization among children and adolescents and has led to changes in the fundamental features of life as well as changes in the way individuals mutually influence each other (Subrahmanyam & Greenfield, 2008).

Kassinove and Sukhodolsky (1995) defined anger as an emotional state. Kassinove also defines anger as specific cognitive and perceptual distortions, deficiencies, and subjective labelling; phenomenological negative mood and socially structured tendency; and a reinforced organized behavior. According to Golden (2003), individuals show an anger reaction when they perceive that their desires, needs, and expectations are not fulfilled. The reaction against anger varies whether the individual acts consciously, obtains any power,

and suppresses our reaction. Deffenbacher, Petrill, Lynch, Oetting, and Swaim (2003) claimed that with an increase in anger level and problems in individual relations, school, and work, activities involving crime and harmful substances increase and dangerous environments allowing the occurrence of improper acts that may harm the individual are created. Additionally, failure in school, problems in individual and social relationships experienced at school and in daily life, and non-performance of behaviors that are suitable for existing order are indicated as related with the emotions constituting anger and hostility (Fryxell & Smith, 2000).

Although the aggressiveness may have more than one stimulant behavior in the early years of childhood, such behaviors become permanent as the cognitive development of child continues with age (Kellner & Bry, 1999).

One of the most significant problems currently is the increasing number of incidents at work and in the home that stem from anger and aggression. (Englander 2003). In the last few years, there has been a significant increase in acts of violent behavior, especially in schools. It is a finding which has been set forth by many researches that information technologies, namely technological devices such as mobile phones, internet, computers and phones are used commonly by individuals of all ages today, especially by adolescents and young people as means for socializing.In particular, internet usage can be seen commonly in the daily life practices. Information technologies cause individuals to develop behaviors such as anger and aggression by influencing their behaviors (Gerçel, 2016). Anger and aggression are two emotions and behaviors that can affect the development of an adolescent and can deeply scar them for life. This is why they adolescents should accept and recognize anger just as any other emotion.

Adolescents are exposed to aggression and violence that affect them and society while they watch media broadcasts and read publications (Yıldız, 2004). In addition, people may encounter aggressive behavior during interactions with those around them while fulfilling their need to socialize (Hasta and Güler, 2013). People mirror this behavior to some extent, and others are affected in different ways by this behavior. Aggression has been a behavior since the beginning of human existence that leads to negative actions such as arguments during games, street fights, and hurting others and making them suffer.

Aggression can be defined as all behavior patterns that aim to physically or emotionally harm any living being or inanimate object. For Geen (1990) aggression is a response that delivers noxious stimuli to another organism. Certainly what we ordinarily call aggression does involve aversive stimulation of some sort and intensity, whether it be in the form of a bullet, a bomb fragment, a physical blow, or some more subtle act such as an insult or an undeserved criticism. These types of behaviors can be innate but may also surface from the influence of the environment one lives in or the impressions one's experiences leave behind. Therefore, adults need to encourage and assist young people's development as moral agents by helping them formulate rules or codes to guide acceptable behavior, especially in the

online environment (Patterson, Allan, & Cross, 2016). Yeşilyaprak (2003) indicates that the obligation of modern education is to "enable and help students to develop both physically and psychologically as happy, productive, and active members of society."

Aggression stemming from anger is a big problem in today's society. There is grave concern, especially among administrators, teachers, and parents of children who are exposed to this disruptive behavior within the confines of the schools. Such undesirable behavior is thought to affect the academic environment negatively. Aggression or aggression-based behavior at school may well result in low grades and less success in overall school-related activities (Fryxell & Smith, 2000). In order to maintain an orderly and productive school environment, strategies must be developed to correct these behaviors.

This research aims to examine and analyze the measures education administrators have taken to prevent anger and aggression in students who use technology in order to determine how effective these countermeasures have been.

## MATERIAL AND METHODS

Qualitative study methods are used to utilize observed interviews, and document analysis is used for data collection in a qualitative research. According to Padgett (2016), the fundamental property of a qualitative study is that the researcher is able to see the world through the eyes of the participants because the participants weigh in their opinions on the matter and reveal their inner world during the study.

### Research Group

The study was conducted in all public and private secondary education institutions within the borders of the Nicosia Municipality during the 2013-2014 and 2014-2015 academic years.

One principal and one vice principal (a total of 22 participants) were chosen from each school within the borders of the Nicosia Municipality, North Cyprus to participate in determining the main objective of this study.

### Data Collection Tool

During the study, a semi-structured interview form was used as the data collection tool. In these interviews, the participants were asked to give their opinion on how the use of technology in private and state schools negatively affects the student behavior. An interview is the most widely used qualitative technique. This technique aims at capturing and understanding the relativity of social facts. Its most important advantage is that it is enables the researcher to understand the interviewees' perspectives about the subject and to uncover the social process in which these perspectives were formed. Quite often, a qualitative study utilizes in-depth interview (face-to-face interview), direct observation, and document analysis techniques (Legard, Keegan, & Ward, 2003). The data for this qualitative study was collected using a face-to-face interview technique, which, unlike other data collecting techniques, allowed access to the perspectives of those participating in the study. In-depth interviews are advantageous in that there is flexibility in the order in which the participants answer the questions, the information about the subject may be elaborated on, the setting in

which they take place can be controlled, and the response rate is high. This technique reveals many aspects about why the participants responded as they did, such as their emotions, thoughts, and beliefs. (Legard, Keegan & Ward, 2003).

Interviews are comprised of three styles: the conversation-style interview, the standard open-ended interview, and the form-based interview (Patton, 1999). This research was conducted using form-based interview. This technique was used because it allowed the researcher the flexibility of composing questions at the time of the interview, changing the order of the questions, and intervening with the duration of the interview when necessary. The administrators participating in the study were asked questions regarding how the use of technology triggered anger and aggression in adolescents. The interviews were taped with the consent of the interviewees to avert any loss of data throughout the study.

The interview forms comprised questions that allowed the school administrators to reveal their exact views on the effects of technology and the measures taken to prevent them. The interview form was presented to faculty members of Near East University, Faculty of Education, and Department of Education Sciences for expert opinion in order to maintain internal validity. The form was revised upon the feedback. Next, an interview was administered to a pilot group whose qualifications were similar to that of the focus group. This established whether the questions were clear and understandable and whether the given answers reflected the conceivable answers to the questions in the form. Later, to assure that the questions on the interview form were clear and understandable, that correct grammar was used, and that all the questions were related to the research topic, the interview form was inspected by pedagogical guidance specialists, education administration specialists, and Turkish linguistics specialists. These specialists determined that the form met all the measures for correct data collection. Content analysis was used to analyze the data obtained from the forms answered by the participants of the study.

## Data Collection Process

Interviews with all of the school administrators working in state and private schools within the Nicosia Municipality, North Cyprus, were conducted during the data collection process. The participants were advised about the study and the technique that was going to be applied prior to the implementation. Appointments for the implementation dates were set up with the volunteer participants and the data was collected during the fall semester of the 2013-2014 academic year. The data collection process began after obtaining the necessary permission from the Ministry of Education.

Each face-to-face interview with the administrators took approximately 20 minutes. The ethics of confidentiality and the use of a recording device during the interview with the consent of the participant were taken very seriously. In order to avoid any confusion during the interview, along with the recording, meticulous notes were taken.

**Analyses of Data**

Each answer given by the participants was categorized and entered in a table. After this initial categorization, the data were analyzed again by the researcher and basic themes/topics and categories were established. Taking into consideration the literature on this subject, the themes and categories were analyzed once more; categories with similar patterns were merged and those that were different were collected and coded under a different category. A number was assigned to each administrator and was entered beside each of the categories. Example sentences taken from the categories were written in the statement section. The individual interviews were carried out by visitations to school administrators at their place of employment during hours that were suitable for them. The face-to-face interviews with the administrators were implemented in settings.

The data collected from the answers to the questions was analyzed using content analysis such as;

1. *Data coding*: In this first stage of content analysis, each of the participants were assigned a number. After the interview forms were broken down, the data collected from the participants was examined within the frame of the study and coded accordingly. After all the data was reviewed, the final form of the code list was prepared in accordance with the conceptual framework of the research and the answers of the participants. This code list was used as the key list in the data organization. The data that were not relevant to the survey questions were left out. Later, each of the semi-structured interview forms were analyzed by the researchers using the coding keys and after discussions about whether they agreed or disagreed, the necessary adjustments were made. For the calculation of reliability, the reliability formula recommended by Miles and Huberman (1994) was implemented with a reliability outcome of 94% on average. A study is accepted as reliable when the outcome of the calculation of reliability is over 70% (Miles and Huberman, 1994), meaning that this study is considered reliable.

2. *Finding themes*: At this stage, each data was established as a different category and was evaluated as different themes during the coding stage.

3. *Organizing data based on themes and codes*: At this stage, the views of the participants have been explained in a manner that the reader can understand, and this is given to the reader. In order to reveal which participant the notes belong to, footnotes have been used, and notes from the interview have been specified in quotation marks. The following is an example of the coding system:

   EXAMPLE: "…………………………." (I:S(1)), (I:P(1)).

        I: Interview; P: Private School Administrator; S: State School Administrator;

        1: First Participant

4. *Interpretation of findings*: The data that had been thoroughly defined and presented were interpreted by the researcher, and some results were presented at this last stage. The data underwent the necessary steps of a qualitative study and certain conclusions were derived from the interpretation.

# FINDINGS

In this section, the collected data is analyzed and the results are interpreted. Each table is interpreted individually.

**I. Dimension: The administrators' opinions about the anger and aggression displayed by students who use technological equipment.**

Table 1 below presents the themes to which the participants responded and the response ratios and their opinions.

**Table 1.** *The administrators' opinions about the anger and aggression displayed by students who use technological equipment*

| THEME | PRIVATE SCHOOL ADMINISTRATOR | | | | | PUBLIC SCHOOL ADMINISTRATOR | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Agree | Do not Agree | Total | | Percentage | Agree | Do not Agree | Total | | Percentage |
| **Lack of interest in the lesson** | - | 4 | 4 | 0 | 100 | 2 | 16 | 18 | 11.1 | 88.9 |
| **Displays of negative responses toward their surroundings** | 1 | 3 | 4 | 25 | 75 | 13 | 5 | 18 | 72.2 | 27.8 |
| **Technology addiction** | - | - | - | 0 | 0 | 7 | 11 | 18 | 38,8 | 61,2 |

### Lack of interest in the lesson

The participants stated that none of the students who used technological devices lacked interest in their lessons. However, administrators of state schools stated that 11.1% of students showed lack of interest in lessons due to the use of technological devices. A state school administrator's opinion on this matter was as follows:

> Due to the use of technological devices, the level of patience of the students has considerably decreased. Therefore, their concentration span is short, they lack patience to listen and take notes during the lesson. They get bored very quickly so they become contentious with the teacher and start to show anger (I:S(16)).

Another state school administrator stated: "When we confiscate their smart phones during school hours, the students are very perturbed by this; thus they are preoccupied with

retrieving their phones throughout the day. As a result, they become disinterested in their classes" (I:S(4)).

### Displays of Negative Responses toward Their Surroundings

The data collected about technology-based anger and aggression of students reveal that 25% of administrators at private schools and 72.2% at state schools reported that students display negative behavior toward their surroundings. The state school administrators revealed that these behaviors include forming gangs, use of foul language, bullying of younger students, vandalism of school property, and recording and social network sharing of teachers without consent.

A private school administrator stated their opinion on this matter as follows:

> The student feels anger when their smart phones are confiscated by the administration. This anger is transferred to those around them through aggression. They may leave school premises and become angry at members of their families, friends, and their environment and thus become aggressive (I:P(3)).

A state school administrator's view:

> A significant change in students' behaviors was observed in particular with the introduction of smart phones into our lives. Students spend all day and night messaging each other in and out of school. These messages may sometimes result in tension between students and consequently arguments may result in fights within school premises. Most students form gangs that include members from outside the school. The misuse of technological devices is causing many problems within the school. (I:S(6))

### Technology Addiction

Private school administrators indicated that they did not experience any problems with technology addiction among students at their schools, whereas 38.8% of administrators at state schools stated that their students displayed signs of anger and aggression stemming from technology addiction. "They are addicted to technology. They feel anger toward restrictions and limitations. At times they feel anger toward the things their peers share about them in social media" (I:S(9)). Another state school administrator expressed the following views:

> *Technological devices cause addiction just like other addictive substances; thus students may show signs of anger and aggression. Smart phones in particular have become a problem. If the student feels that their whole life is revolves around the phone and that they can do nothing without it, they may feel anger and display aggression when they have no or limited access to it. Although they are not the majority of the school's composition, they do cause a lot of problems with their overreactions, insistence, and displays of anger and aggression. (I:S(5)*

Moreover, state school administrators have advised that extended use of technological devices leads to energy accumulation. In addition, they indicated that students dependent on technology begin to show anger and aggression because of the influence of what they follow on social media and because they aim to impress their peers.

**II. Dimension: The administrators' opinions about the effectiveness of the preventive measures taken to avoid the manifestation of anger and aggression stemming from the use of technological devices.**

Table 2 below presents the themes to which the participants responded, the response ratios, and their opinions.

**Table 2.** *The administrators' opinions about the effectiveness of the preventive measures taken to avoid the manifestation of anger and aggression stemming from the use of technological devices*

| | Agree | Do not Agree | Total | Percentage | | Agree | Do not Agree | Total | Percentage |
|---|---|---|---|---|---|---|---|---|---|---|
| **Deterrence and suppression** | 1 | 3 | 4 | 25 | 75 | 2 | 16 | 18 | 11.1 | 88.9 |
| **Confiscating the  smart phones** | 2 | 2 | 4 | 50 | 50 | 6 | 12 | 18 | 33.3 | 66.6 |
| **Educational seminars on implementation of technological devices** | 1 | 3 | 4 | 25 | 100 | 11 | 7 | 18 | 61.1 | 38.8 |
| **Educating the parents** | 1 | 3 | 4 | 25 | 75 | 10 | 8 | 18 | 55.5 | 44.5 |
| **Organizing social activities** | - | 4 | 4 | 0 | 100 | 6 | 12 | 18 | 33.3 | 66.7 |
| **Referrals to guidance counsellors** | 1 | 3 | 4 | 25 | 75 | 5 | 13 | 18 | 27.7 | 72.3 |

## Deterrence and Suppression

Twenty-five percent of the private school administrators participating in this study stated that they used deterrence and suppression as a means to avoid the negative effects of technological devices on students, whereas 75% claimed that they did not. Eleven point one percent of state school administrators said that they administered deterrence and suppression as a means of prevention of the effects of technological devices, whereas 88.9% said that they did not. One of the participants stated "When all phones are confiscated, there is an ascension of anger among the students. The students insist on taking back their smart phones and there is an incredible increase of anger" (I:S(2)). According to the opinion of a private school administrator, "students feels extreme rage toward the administration the

moment their phone is confiscated and as this rage increases, aggressive behavior emerges" (I:P(3)).

## Confiscating the smart phones

Fifty percent of the participants from the private schools indicated that school administration confiscated smart phones from students who displayed this sort of behavior and 50% stated that they did not. Thirty-three point three percent of the state school administrators said that they confiscated smart phones as a preventive measure to prevent anger and aggression that manifest through usage of technological devices. A private school administrator pointed out that at his school they began confiscating phones at the school gate. We implemented this prevention method from the very beginning in order to avoid any such problems. Students hand over any smart device they have on them to the teachers in charge and they are aware that they will face disciplinary punishment if any device is found within their possession during school hours. (I:(P(1))

## Educational Seminars on Implementation of Technological devices

Twenty five percent of private school administrators participating in the research and 61.1% of state school administrators said that informative seminars on implementation of technological devices were organized. A private school administrator claimed that "seminars are held to advise students on where, how, when to use technological devices and on the advantages and disadvantages of using them" (I:(P(2)). Two state school participants told the interviewer the following: "Students are warned to use technology in a beneficial manner. At times, seminars are organized as well" (I:(S(11)) and "Students are educated on how to use technology to their benefit. Moreover, seminars and meetings aimed at coordinating the education and values gained within the family with the education received at school are held for parents to attend" (I:(S(12).

## Educating the Parents

Twenty five percent of private school and 55.5% of state school administrators expressed the view that parents should be educated about their children's usage of technological devices at school. According to one state school administrator, "We are conducting more teacher-parent conferences where parents are informed about all aspects of education and extracurricular activities, which we are increasing" (I:(S1)). A private school administrator expressed an opinion on this matter: "The parents are invited to visit the school's guidance counsellor to learn about the rules, the consequences of breaking them, and advising their children not to use these devices during school hours" (I:(P(3)).

## Organizing Social Activities

No participants from private school administration mentioned social activities as a prevention measure, whereas 33.3% of state school administrators suggested organizing social activities as a means to prevent anger and aggression caused by using technological

devices at school. Some state school administrators expressed their views on this theme: "Students are encouraged to engage in a social and cultural activity that they feel close to" (I:(S(13)), "By giving students seminars, social activities, and responsibilities, disciplinary punishments are decreasing" (I:(S(14)), "We are increasing the number of social activities by forming football, basketball, and wrestling teams along with clubs such as the history club" (I:(S(1)), and "We can claim that anger and aggression among students has been reduced with the development of student-centered social activities and group and art activities where students are allowed to express themselves" (I:(S(15)).

### Referrals to Guidance Counsellors

Twenty-five percent of private school administrators and 27.7% of state school administrators said it was necessary to refer students to guidance counsellors. In reference to this theme, a private school administrator listed the following actions that could be taken: "The disciplinary board, referrals to guidance counsellors, meetings with parents, and warning students against using devices at school" (I:P(3)). Some state school administrators expressed their views: "School administrators, teachers, and counsellors work with students in groups as well as individually. The counsellors have a scientific approach and there are counselling sessions held in classes" (I:S(17)) and "Since we have not conducted research into why these students display anger and aggression, we refer them to guidance counsellors" (IS(18)).

**III. Dimension: The effectiveness of preventive measures implemented by school administrations in order to eliminate the anger and aggression caused by the use of technological devices.**

**Table 3.** *The effectiveness of preventive measures implemented by school administrations in order to eliminate the anger and aggression caused by the use of technological devices*

| THEME | PRIVATE SCHOOL ADMINISTRATOR | | | | | PUBLIC SCHOOL ADMINISTRATOR | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | Do not Agree | Total | Percentage | | Agree | Do not Agree | Total | Percentage | |
| **Insufficient countermeasures** | 1 | 3 | 4 | 25 | 75 | 8 | 10 | 18 | 44.4 | 55.6 |
| **Parent participation** | - | 4 | 4 | 0 | 100 | 4 | 14 | 18 | 22.2 | 77.8 |
| **Acceptance of the rules** | 2 | 2 | 4 | 50 | 50 | 2 | 16 | 18 | 11.1 | 88.9 |

Table 3 displays percentages the data collected for each theme and the opinions of the participants.

### Insufficient Countermeasures

Twenty-five percent of private school administrators and 44.4% of state school administrators opined that the countermeasures to prevent anger and aggression caused by the use of technological devices at school were insufficient.

The views on this theme were as follows: "The countermeasures taken at school are not enough; they must be collaboration with parents" (I:S(1)), "Students succumb to the urges to use technological devices and since proper countermeasures are not taken, they choose not to follow school rules and regulations. Thus these behaviors prevail and anger transforms into aggression" (I:S(2)), "We cannot prevent it no matter what measures we take since they do not know when, how, and where to implement these devices responsibly" (I:S(6)), and "Although they are warned to switch off these devices during school hours, we as administrators and teachers have realized that there is not much we can do to prevent these unwanted actions so we have come to accept the situation" (I:P(3)).

### Parent Participation

Twenty-two percent two of state school administrators noted a lack of interest in part of the parents, whereas none of the private school administrators expressed any opinion about the countermeasures taken by administrations to eliminate the anger and aggression caused by technological devices. "The problem can be overcome easily with the collaboration of parents, counsellors, and administration. We include the family (or we try, though it is very difficult). Parents are indifferent." (I:S(8)) Another state school administrator stated, "I believe that everything could be solved with education. Of course there are exceptions, yet we see that these behaviors lessen with the collaboration of educators and parents" (I:S(12)).

### Acceptance of the Rules

Fifty percent of private school administrators and 11.1% of state school administrators stated that the students accepted the rules.

A state school official states, "There should be clear-cut rules and they should be carried out. . . . When a group is warned of this rule from the beginning, they accept it" (I:S(5)) and a private school official stated, "Since they are notified of the rules from the beginning, we are not confronted with any problems" (I:P(1)).

## RESULTS AND RECOMMENDATIONS

The results of the research on the preventive measures taken toward technology-based anger and aggression that students display and the responses given by administrators who participated are presented below in three dimensions.

**I. Dimension: The administrators' opinions about the anger and aggression displayed by students who use technological equipment.**

The administrators of private schools stated that none of the students who used technological devices lacked interest in their lessons. However, 11.1% of administrators of state schools stated that students showed lack of interest in lessons due to the use of technological devices.

Based on these findings, there is no lack of interest toward the lessons in private schools since the students receive technology-based education. However, the students of state schools display problems such as lack of interest and concentration and suffer from loss of patience and lack of ability to focus on the lessons. Students with such problems tend to concentrate on more unnecessary things and thus cannot show the necessary attentiveness toward the lessons. Undesirable behavior is "behavior that interrupts and disturbs the general flow of the lesson and lends itself to indifference toward the lesson" (Özdemir, 2004).

### Displays of Negative Responses toward Their Surroundings

The data collected about technology based anger and aggression of students reveals that 25% of participants from private schools and 72.2% of participants from state schools reported that students display negative behavior toward their surroundings.

Lack of parent supervision may be the cause of this. Children who grow up in unstructured families and who do not get enough attention from their parents tend to be predisposed to displaying signs of aggression and tend to be more prone to the negative effects of technology (Subrahmanyam & Greenfield, 2008).

Factors such as the outlook parents have toward education, the social standing of a family, the income of the family, environmental influences, the components of the culture the parents choose to adopt, their approach and attitude toward raising children, their level of education, and the size of the family are effective components of how a child behaves in school and in class (Erdoğan, 2008).

Private school administrators indicated that they did not experience any problems with technology addiction among students at school whereas 38.8% of administrators at state school stated that their students displayed signs of anger and aggression stemming from technology addiction.

Students in private schools are not overwhelmed by the use of technological devices since they are a part of the education system. However, the situation at state schools is more complex. The parents of these students do not take enough interest in their children, so these children may feel isolated. This may prompt them to spend an excess amount of time using technological devices, which in turn may result in unwanted behaviors. Social events can be organized in order to create awareness about the negative impact that technology addiction has on children. In their longitudinal study on violence on television and the violent

behavior of individuals, Huesmann, Moise-Titus, Podolski, & Eron (2003) concluded that watching violent programs on the television between the ages of 6-10 is the only determinant of aggressive behaviors in people over the age of 15. In order to lessen this influence, watching violent movies on the television should be minimized for children and adolescents. One proposal might be organization of programs by school administrators to ensure student development, which would allow the students to value and trust themselves, create easy dialogues with their surroundings, and have critical thinking skill (Johnston, 2002).

## II. Dimension: Administrators' opinions about the effectiveness of the preventive measures taken to avoid the manifestation of anger and aggression stemming from the use of technological devices.

Twenty-five percent of the private school administrators participating in this study stated that they used deterrence and suppression as a means to avoid the negative effects of technological devices on students. Eleven point one percent of state school administrators said that they administered deterrence and suppression as a means of prevention of the effects of technological devices whereas 88.9% said that they did not.

Tanrıöğen (2000) give six dimensions of requirements for school principals in their roles as educational leaders: "Developing education and educators, improving the educational environment, having good communication skills, supervising education, defining objectives, and monitoring student development" (p.70). Based on the findings, private school administrators did not feel the need to use deterrence and suppression as a means to prevent anger and aggression stemming from the use of technology in schools. Therefore, private school administrators fulfilled the requirements of Tanrıöğen's definition of educational leadership and did not feel the need to use prevention strategies.

When taken into account that anger and aggression is caused by restriction and suppression, it is necessary to eliminate these factors. It is important that parents be equipped with the resources to satisfy the needs of the students. Parents can consult the school's counselors and psychologists for guidance during this process.

Fifty percent of the participants from the private schools indicated that school administration confiscated smart phones from students who displayed this sort of behaviors. Thirty-three point three percent of the state school administrators said that they confiscated smart phones as a preventive measure and two participants stated that the confiscated them in order to prevent anger and aggression that manifest through usage of technological devices. The present state indicates that the rules in private schools have not been fully implemented due to interference from parents and that the academic rules and regulations of state schools are insufficient to uphold the attempts to prevent the negative effects of technology-based anger and aggression of students.

Twenty-five percent of private school administrators participating in the research and 61.1% of state school administrators said that informative seminars on implementation of technological devices were organized.

We infer from the results of the interviews that educational seminars involving school administrators, parents, and students are being conducted at this stage and that they are proving to be beneficial as a prevention measure against technology-based anger and aggression.

Twenty-five percent of private school and 55.5% of state school administrators expressed the view that parents should be educated about their children's usage of technological devices at school. We infer from the present situation that both state and private school administrators believe that parents need to be educated.

Parents and students need to have more knowledge about the usage of technological devices. Non-formal education seminars held outside working hours can inform parents and students on this theme.

No participant from private school administration mentioned social activities as a prevention measure, whereas 33.3% of state school administrators suggested organizing social activities as a means of preventing anger and aggression caused by using technological devices at school. Private school administrators did not believe that students were negatively affected by the use of technological devices; therefore, they did not use social activities as a means of prevention. However, state school officials believed that by focusing on social activities students found an outlet for their energy and engaged in social interaction, which in turn hindered negative thoughts and behavior related to technology. Students should be motivated to be involved in social and physical activities in school and out of school. Parents ought to have an active role in inspiring the students to be more energetic.

Twenty-five percent of private school administrators and 27.7% of state school administrators said it was necessary to refer students to guidance counsellors. Guidance counsellors are a source for helping eliminate anger and aggression in students in both types of education institutions. Guidance counsellors and psychologists are present at schools to help eliminate unwanted behaviors students display at school. However, the findings indicate that the application of these facilities is inadequate. According to Cushing, Horner, and Barrier (2008), the administrators, teachers, and school should eliminate the elements that support the undesired behaviors and aim to prevent the formation of similar behaviors rather than reacting against violence and aggression. Various studies have reported that a positive school environment has a major impact on the prevention of violence (Brand et. al, 2003; 2009; Gottfredson & Gottfredson, 1985; Khoury-Kassabri, Benbenishy, & Astor, 2005; Welsh, 2000).

**III.** *Dimension*: **The effectiveness of preventive measures implemented by school administrations in order to eliminate the anger and aggression caused by the use of technological devices.**

Twenty-five percent of private school administrators and 44.4% of state school administrators opined that the countermeasures to prevent anger and aggression caused by the use of technological devices at school were insufficient. A lack of support from parents, inadequate laws, and insufficient knowledge on how these devices are to be used are the bases for this problem in state schools, whereas private schools point out that countermeasures are not sufficient since parents promote and support the use of technological devices. We recommend that the Ministry of Education in North Cyprus should add this to its legislations and conduct studies designed to help construct effective prevention measures.

Twenty-two point two percent of state school administrators reported a lack of interest on the part of parents, whereas none of the private school administrators expressed any opinion about the countermeasures taken by administrations to eliminate the anger and aggression caused by technological devices.

None of the parents who sent their children to private schools showed any interest in participating to prevent the negative outcomes of technology and only a few parents with children in state schools participated. This signals that there has been no collaboration between institutions and parents when implementing these countermeasures. Moreover, there has been lack of communication between the two parties. Attention has been focused on creating and sustaining school environments that improve lifestyle results (personal, health, social, family, work, recreation, etc.) for all children and youth by making problem behavior less effective, efficient, and relevant and making desired behavior more functional (Sugai et. al, 2000).

Fifty percent of private school administrators and 11.1% of state school administrators stated that the students accepted the rules. The results lead us to the view that students in private institutions are more accepting of their institution's rules than students attending state schools are. The first education a person receives at a young age within the family tends to have a more permanent impact on them. Rules are a part of the educational attainment. Therefore, children who grow up knowing the family rules and abiding by them within the unit are able to accept rules set by the schools they are attending. As a result, it is important that parents have an active role in the development and implementation of the practices schools adopt.

As soon as the education process begins, parents and students should be made aware of the rules and regulations that the school set at the beginning of the academic year. We suggest that school administrators who are open to improvements and change, who have the qualities of a leader, and who improve themselves be chosen for the position of administrators.

# REFERENCES

Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety. *Journal of Educational Psychology*, *95*(3), 570.

Brzezinski, Z. (1970). *Between two ages* (p. 290). Viking Books.

Cushing, L. S., Horner, R. H., & Barrier, H. (2003). Validation and congruent validity of a direct observation tool to assess student social climate. *Journal of Positive Behavior Interventions*, *5*(4), 225-237.

Deffenbacher, J. L., Petrilli, R. T., Lynch, R. S., Oetting, E. R., & Swaim, R. C. (2003). The Driver's Angry Thoughts Questionnaire: A measure of angry cognitions when driving. *Cognitive Therapy and Research*, *27*(4), 383-402.

Drucker, P. F. (1999). Knowledge-worker productivity: The biggest challenge. *California Management Review*, *41*(2), 79-94.

Englander, E. K. (2003). *Understanding violence*. Psychology Press.

Erdoğan, İ. (2008). *Eğitim ve okul yönetimi*. İstanbul: Alfa Yayıncılık.

Fryxell, D., & Smith, D. C. (2000). Personal, social, and family characteristics of angry students. *Professional School Counseling*, *4*(2), 86.

Geen, R. G. (1990). *Human aggression*. E. D. Donnerstein (Ed.). Milton Keynes: Open University Press.

Gerçel, E. (2016) Processes of the School Management, Usage of Information Technologies in Adolescents and Aggression Relation. *The Turkish Online Journal of Educational Technology* – Special Volume - July, 437.

Grant, E. H. (1964). *Defining School and Family Cooperation and How to Maintain it,* Ankara: Fine Arts Publishing House.

Golden, B. (2003). *Healty Anger*. New York: Oxford University Press.

Gottfredson, G. D., & Gottfredson, D. C. (1985). *Victimizatization in schools*. New York: Plenum.

Hasta, D., & Güler, M. E. (2013). Saldırganlık: kişilerarası ilişki tarzları ve empati açısından bir inceleme. *Ankara Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *4*(1), 64-104.

Johnston, N. (2002). *Safe schools and healthy students: the effectiveness of grant funded programs in dc public charter schools.* Georgetown University, Department of Sociology and Anthropology, Senior Sociology Thesis.

Kassinove, H. & Sukhodolsky, D.G. (1995). *Anger disorders: basic science and practice issues. anger disorders: definition, diagnosis and treatment*. Washington: Taylor & Francis.

Kellner, M. H., & Bry, B. H. (1999). The effects of anger management groups in a day school for emotionally disturbed adolescents. *Adolescence*, *34*(136), 645.

Huesmann, L. R.; Moise-Titus, J.; Podolski, C. & Eron, L. D. (2003). Longitudinal relations between children's  to TV violence and their aggressive and violent behavior in young adulthood: 1977-1992. *Developmental Psychology*, *39*, 201-221.

Khoury-Kassabri, M., Benbenishy, R., & Astor, R.A. (2005). The effects of school climate, socioecomics, and culturel factors on student victimization in Israel. *Social Work Research, 29*(3), 165-180.

Köksal, A. (1999). Bilgi Toplumu Değil Bilişim Toplumu, *TBD Bilişim Kültür Dergisi*, Eylül, sayı 75. *ÖCAL, H*, 11.

Legard, R., Keegan, J. & Ward, K. 2003. 'In-depth interviews', in Qualitative research practice. *A guide for social research students and researchers,* Sage, London, 138-169.

Martin, W. J. (1996). *Global information society*. Ashgate Publishing Company.

Naisbitt, J. (2004). *People and Technology*. Trans. Dr. Orkunt Ayaz, Huban Yıldırım, Mehpare Sayan Kileci. İstanbul: CSA Global Publication Agency, XV.

Özdemir, İ. E. (2004). *Sınıf yönetimi.* Editör: Ş.Şule Erçetin, M. Çağatay Özdemir. (Sınıf Ortamında İstenmeyen Davranışlar Bölümü). Ankara: Asil Yayın Dağıtım.

Özdevecioğlu, M. & Yalçın, Y. (2010). Spor tatmininin sporcuların stres ve saldırganlık düzeyleri üzerindeki etkisi. *Nigde Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi. 4* (1), 63-76.

Özyürek, L. (1983). Çocuğumun Öğretmeni (Veli-Öğretmen İlişkisi Konusunda Küçük Bir İnceleme). *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 16*(2), 61-76.

Padgett, D. K. (2016). *Qualitative methods in social work research* (Vol. 36). Sage Publications.

Patton, M.Q. (1999). How to use qualitative methods ın evaluation. Newbury Park, C.A: Sage.

Patterson, L. J., Allan, A., & Cross, D. (2016). Adolescent bystanders' perspectives of aggression in the online versus school environments. *Journal of adolescence*, *49*, 60-67.

Subrahmanyam, K., Reich, S. M., Waechter, N. & Espinoza, G. (2008). Online and offline social networks: Use of social networking sites by emerging adults. *Journal of Applied Developmental Psychology. 29*, 420-433.

Subrahmanyam, K. & Greenfield, P. (2008). Communicating online: Adolescent relationships and the media. *The Future of Children: Children and Media. Technology. 18*, 119-146.

Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., ... & Turnbull, H. R. (2000). Applying positive behavior support and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions*, *2*(3), 131-143.

Tanrıöğen, A. (2000). Temel egitim ogretmenlerinin okul mudurlerinden bekledikleri ogretimsel liderlik davranislari. *Pamukkale Universitesi, Egitim Fakultesi Dergisi*, *7*, 67-73.

Yeşilyaprak, B. (2003). *Eğitimde Rehberlik Hizmetleri*, (6. Baskı). Ankara: Nobel Yayın Dağıtım.

Yıldız, S. A. (2004). Ebeveyn tutumları ve saldırganlık. *Polis Bilimleri Dergisi, 6*(3-4), 131-150.

Ward, K. (2003). '*In-depth interviews', in Qualitative research practice*. A guide for social research students and researchers, Sage, London: 138-169.

Welsh, W. N. (2000). The effects of school climate on school disorder. *The Annals of the American Academy of Political and Social Science*, *567* (1), 88-107.

**http://iserjournals.com/journals/eurasia**