

Emotional intelligence and ICTs in School bullying

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Abstract.

This thesis explored how much students' emotional intelligence levels could predict their behavior as bullies or victims, as well as how much emotional intelligence could act as a protective or preventive factor against school bullying incidents, in order to identify the role of emotional intelligence in bullying incidents. The methodological strategy that was used was the literature review strategy. The analysis's findings demonstrated that emotional intelligence is associated with lower levels of engagement in bullying events because students who have greater levels of emotional intelligence are less likely to take part in bullying occurrences as bullies or victims. Additionally, bullied children have trouble understanding and controlling their emotions, but they have little trouble recognizing and expressing their emotions. It appears that neither bullies nor victims have the skills needed to control or regulate their emotions. As a result, the enhancement of intervention programs may be aided by the measurement of students' emotional intelligence levels, which also effects as a protective and preventative measure. Children are increasingly using mobile phones and computers in their daily lives since communication has become easier. Children also use the Internet and two-way communication media more frequently, in addition to transfer a lot of information. Researchers have looked into the characteristics of cyber-bully perpetrators and victims, as well as the incidence rate of cyber-bullying and victimization (Ybarra & Mitchell, 2004; Li, 2006; Juvonen & Gross, 2008). The problem of "cyber-bullying" has been getting worse in every country as Internet use has increased

Keywords. ICTs, emotions, management, emotional Intelligence, school bullying, cyber-bullying

1. Introduction

Bullying is recognized, at a global level, as a serious problem that arises in school during childhood and adolescence (UNESCO, 2019). In fact, it is considered an important issue to study due to the high incidence of bullying, as according to international epidemiological studies, 2% to 12% of children attending schools worldwide are victims of bullying (Leon-de-Barco et al., 2020). Bullying is defined as a form of abuse committed by peers repeatedly over time (Zych et al., 2015) and is characterized by a constant abuse of power, as perpetrators engage in acts that intentionally harm victims, who feel powerless to defend themselves (Armero et al., 2011). Victimization can have serious consequences for children's development, both in a short and long term (Cammack-Barry, 2005), causing personal, social and emotional problems that can lead to a decline in the quality of life and well-being of the individual (Fuentes et al., 2019). Some of the most common effects of victimization are sleep disturbances, sadness, low self-esteem, low emotional and social self-concept, low self-confidence and increased levels of anxiety (Alonso et al., 2019; Puertolas and Montiel, 2017).

Although the concept of emotional intelligence has developed considerably, it is still subject to controversy. Typically, two different concepts of emotional intelligence have been

identified. The first concept is based on a combination of a number of personality-related traits (Bar-On, 2000), while the second one defines emotional intelligence as the ability to perceive and understand emotional information. Emotional intelligence includes emotional awareness (awareness of one's emotions and the ability to recognize those emotions and understand their meaning), emotional clarity (ability to understand and perceive one's emotions), emotional recovery (ability to regulate and control positive and negative emotions) and the three processes of emotional perception, emotional understanding and emotional regulation, which allow negative emotions to be minimized, controlled or prevented and positive emotions to be expanded, resulting in both negative and positive emotions being intensified (Chaidi, Driags et al., 2021; Gross, 2014).

Furthermore, cyberbullying is a very significant societal issue that has recently arisen as a result of the ongoing evolution of contemporary technologies. Unfortunately, academic institutions, educators, parents, and those who offer emergency services pay very little attention to this worldwide issue. Because bullying in schools and universities is producing unfathomable issues for students, parents, and educational institutions, students are prevented from achieving in their academics (Newman, Michelle G. et al., 2011) due to the depressed effect of cyberbullying. Because of this, not much has been done to assist the victims who are perpetually imprisoned in the name of modernity and digitization. Although many students who are victims of cyberbullying suffer in silence and are reluctant to report their abuse to the authorities or their parents due to the social stigma associated with bully victims, researchers agree that the stressful effects of bullying are intensifying with the rapid expansion of technological advancement. As a result, such situations must be watched out by parents, educators and institutional authorities (Hampton, Keith, et al., 2011). The purpose of this study is to investigate the impact of emotional intelligence and the rapid development of ICT's on the phenomenon of school bullying.

2. The School Bullying

School bullying continues to be a significant threat to children and adolescents, despite the relevant research and the implementation of bullying prevention programs through decades. In fact, bullying has been cited as the most significant threat to students' well-being at school, while the pervasiveness of all forms of bullying has been highlighted (PISA, 2018). In the PISA reports, it is stated that, on average, in OECD countries, about 23% of students have been bullied at least a few times per month in 2018, while the corresponding figure for 2015 was 19%. Moreover, during the last two decades, many researchers have focus on the phenomenon of school bullying (Regmi et al., 2019; Wolke et al., 2013; Srabstein and Leventhal, 2010; Piskin, 2010).

School bullying, seems to be a significant problem for teachers and it is described as repeated aggressive behaviors exhibited by more powerful individuals or groups against less powerful individuals or groups, trying to cause harm or discomfort (Rosen et al., 2017). Although school bullying is defined as aggressive behavior among peers, it differs from other forms of aggression in terms of the three key characteristics of intent, repetitive nature, and power imbalance, which favors the bully (Hymel and Swearer, 2015; Piskin, 2010). In fact, it is emphasized that distinguishing between school bullying and other forms of aggression among

students appears to be of critical importance, since the aforementioned unique characteristics of school bullying make it more harmful than similar forms of aggression (Gladden et al., 2014).

School bullying can happen in a direct or indirect way. The direct form of school bullying includes, aggressive behaviors, expressed face to face. In a typical case, the bully threatens the student-victim verbally, physically and embarrasses him socially (Gladden et al., 2014). When school bullying is expressed indirectly, the bully targets the reputation or social status of the individual student, when the latter is not present, by spreading rumors or organizing groups of students trying to isolate the victim (Wright, 2004). Furthermore, school bullying can take place within numerous of different contexts, such as school, internet, school events, the school bus, etc., while school bullying behaviors within the aforementioned contexts can take the form of physical, verbal or social media aggressive behavior. The physical form of intimidating behavior can be expressed through the destruction of personal property, kicking, hitting, etc., while verbal threats or threats with gestures, text messages, indecent sexual comments, etc. are examples of verbal bullying behavior between the bully and the victim. On the other hand, social bullying behavior manifest through causing damage to the victim's social status, through attacks on the victim's relationships with other students (Stathopoulou, Drigas et al., 2018). Social bullying can also occur via the internet, through the use of social media, smart mobile devices, etc. In this case, the bullying is called cyberbullying (Gladden et al., 2014).

As a relatively new form of school bullying, cyberbullying includes all the basic characteristics of traditional bullying, but the methods and context of bullying behavior differ from those of traditional bullying (Foody et al., 2018). Despite these differences, relevant research reveals that traditional bullying and cyberbullying can occur simultaneously (Wang et al., 2009). Similarly, it is stated that cyberbullying is an extension of traditional bullying, with the only difference being the expansion of the location from school to internet.

This type of bullying, includes unwanted sexual behavior such as sending written, audio or visual sexual messages or comments and sharing photographic or pornographic images (Gross, 2014). However, sexual bullying or sexual harassment is not limited to the internet but also occurs face-to-face within the school context, through written or verbal sexual comments, through the sharing of sexual images or through physical sexual contact, etc. (Stathopoulou, Drigas et al., 2018).

In addition, homophobic bullying, as a new form of concern for teachers, includes aggressive behaviors related to sexuality and manifested against students because of their gender identity and sexual orientation, while it can be seen that there is a high correlation between homophobic and traditional bullying (Farrelly et al., 2016; Espelage et al., 2015).

In any case, the international literature indicates that school bullying has negative consequences for victims, perpetrators and bystanders, but the most damaging effects are observed in victims, in the form of low self-confidence, low academic performance, negative attitudes towards school, social isolation, loneliness, limited relationships with classmates, lack of sense of belonging at school, depression, anxiety, headaches, feeling threatened, suicidal thoughts and sleep problems (Manna et al., 2019; Evans and Smokowski, 2016; Gladden et al. ., 2014). The negative consequences on students' physical and mental health, their academic performance, their psychological well-being, their social development and the understanding and treatment

of bullying incidents, are considered a public health and educational priority (Foody et al., 2018). Among other important parties, the school principal is the most important party that can deal with bullying among students. The school principal, is the implementer of policies, strategies and programs or models that can prevent school bullying (Stathopoulou, Drigas et al., 2018). His role, thanks to his understanding of the causes of school bullying, risk-protective factors and his skills, attitudes and experiences, is really necessary to the success of the aforementioned prevention initiatives (Foody et al., 2018; Farrelly et al., 2016; Evans and Smokowski, 2016).

Hoover and Olson (2000) point out that bullying incidents have a significant impact on schools and communities. In fact, the authors refer to specific characteristics of schools that promote bullying, including the followings (Hoover and Olson, 2000): (i) the feeling of lack of safety, (ii) the outspoken behavior, (iii) the feeling of lack of trust and (iv) the formation of gangs, formal or informal. Usually, in a school, with these characteristics, parents and the community take actions against the school, dealing with the negative climate that prevails in it.

In any case, it appears that the occurrence of bullying behavior is not a result of small or large school classes or the competition that prevails within the school in terms of student performance. Specifically, the violent code of conduct refers to the behaviors, beliefs, and attitudes of all involved, whether it is affection, respect, satisfaction, friendship, or tolerance, dislike, discrimination, favoritism, omission, and intolerance (Gazelle, 2006; Lukas and Robinson, 2004). Bullying and its various forms are a vital part of school life and the classroom and have a significant impact on the lives of students as they affect the well-being and the performance of every member of the school community. The universal presence and extent of the phenomenon of school bullying, and its consequences for the social-emotional and cognitive development of students, make it a priority in the analysis of the school climate, which is necessary for the learning and development of students (Orpinas and Horne, 2006; Ortega and Lera, 2000).

The Skrzypiec et al. (2011) conducted a survey of approximately 1400 students in primary schools in Australia and examined the effects of bullying on students' learning, social and emotional well-being, and also mental health status. According to the results of his analysis, one-third of students who experienced severe bullying reported significant difficulties in concentrating and paying attention in the classroom due to bullying and the fear associated with it (Skrzypiec et al., 2011). Bullying is a form of social interaction that many students experience at school. Among other methods of assessing bullying, self-reports are of particular value, as they ask individuals to identify, within a certain period of time, forms of harassment they often experience or to express their subjective feelings of being a victim (Nansel et al., 2001).

Nishina et al. (2003) compared the relative frequencies of different bullying behaviors experienced by students and concluded that aggression expressed verbally is more frequent than aggression expressed physically or indirectly. The Konishi et al. (2010) studied the link between school bullying, student-teacher relationships, and academic achievement in Canadian schools. Their research sample consisted of approximately 28,000 students, aged 15, who participated in the Program for International Student Assessment. The results of multilevel analyzes showed that academic achievement is negatively related to school bullying and

positively related to teacher-student connection. In particular, students who reported being victims of bullying behavior or other forms of mistreatment by their classmates showed lower academic performance, compared to students who had not been the target of bullying behavior (Stathopoulou, Drigas et al., 2018). In addition, students who reported a good relationship with their teachers also showed higher academic performance (Konishi et al., 2010).

3. Emotional Intelligence

Mayer and Salovey (1997) describe emotion as one of three or four groups of mental functions. Stimulation, which is considered the first group of mental processes, is activated in response to physical needs, such as hunger, thirst, or sexual needs, and directs the organism to satisfy its physical needs. Further, Mayer and Salovey (1997) suggest that the evolved emotions among mammals are based on real or perceived changes of the environment, while cognition allows organism to solve problems and learn from its environment including learning, memory, problem solving and information processing which is conscious and flexible (Mayer and Salovey, 1997). From this view, the term emotional intelligence is considered as the convergence of emotions and cognition.

Sternberg (1997) defines intelligence as a necessity of the intellectual ability to adapt to or shape or choose any environmental context, not only in a specific environmental context. This is a definition similar to the definition proposed by Weschler in 1958, according to which intelligence is the global ability of the individual to act purposefully, to think logically and to deal effectively with his environment (Mayer and Ciarrochi, 2006). The term "intelligence" generally refers to the sharing of information, the processing of information that has been collected, and the computation that comes through the use of information. In 1921, Terman described an intelligent person as someone who can think abstractly (Sternberg, 2000). Traditionally, abstract thinking has been considered an important indicator of intelligence. Typically, intelligence is considered an intellectual ability for problem-solving, analysis, and abstract computation (Chaidi and Drigas et. al., 2022). Considering the combination of the concepts of intelligence and emotion as described above, emotional intelligence can be defined as a general ability of the individual to perceive both his emotions and the emotions of others, to manage emotions and to deal effectively with them (Chaidi and Drigas, 2021).

The concept of emotional intelligence is originally traced to John Dewey's concept of social intelligence, in 1909. According to it, absolute moral motives and powers are nothing more or less than social intelligence, in other words the power of observing and understanding social situations and the social and the capacities of control at work in the service of social interests and purposes (Landy, 2006). Similarly, in 1920 Thorndike described social intelligence as the ability to manage and understand men and women, boys and girls, and to act wisely in the context of human relationships (Zeidner et al., 2009). Thorndike's definition of social intelligence in 1937 refers to the individual's ability to understand and deal with other people and engage in meaningful and adaptive interactions with them (Zeidner et al., 2009). Practically, it is considered to be the individual's ability to process and use emotional information related to key areas of effective functioning in everyday life (Mayer and Salovey, 1997).

Emotional intelligence is a term that includes various skills and abilities, through which a person can perceive and manage emotional situations, whether they concern the person himself or another person, aiming his social and personal development (Drigas and Sideraki, 2021). In modern models of presenting its structure and function, emotional intelligence is defined as a set of functions that follow a hierarchical form with levels one above the other and plays a particularly important role both in education and special education, as well as in entrepreneurship and in health issues (Drigas and Papoutsis, 2020; Drigas and Papoutsis, 2019; Drigas and Papoutsis, 2018). It is a combination of factors related to motivation (Reyes-Wapano, 2021), impulse control (Tice et al., 2001), mood regulation (Reyes-Wapano, 2021) and the ability to persevere in situations of confusion (Reyes-Wapano, 2021). In addition, related research indicates that emotional intelligence functions as a predictor of academic (Downey et al., 2008) and professional (Reyes-Wapano, 2021) success, while other research finds differences between the level of emotional intelligence of the two sexes, with women being characterized by higher levels of overall emotional intelligence (Papoutsis and Drigas et al., 2022).

4. Emotional Intelligence and School Bullying

Consistent with the findings of Eslea and Smith (2000), which indicate that victims of school bullying incidents are characterized by higher levels of empathy toward other victims, Schokman et al. (2014) found a significant correlation between students with a pro-bullying attitude and those who were likely to experience a situation of bullying by their classmates. In this context, it emerged that students who had experienced as victims a situation of bullying by their classmates had higher level of understanding and sympathy towards other students in corresponding victim roles. Furthermore, an adolescent's relative inability to manage (i.e., maintain positive emotions or cope with negative emotions) and control strong emotions is associated with the likelihood of being a victim of bullying. This situation is expressed by ineffective reactions to different bullying situations regarding the choice of stress coping strategies in adolescence, related to the levels of emotional intelligence (MacCann et al., 2011). Another possible reason that explains why a teenager or a child can become victims of bullying is that they are characterized by higher levels of social anxiety, lower levels of self-confidence or social status as a consequence of limited social skills that may attract the attention of bullies (Schokman et al., 2014). Previous research has shown that children who are victims of bullying situations are often characterized by a lack of social skills and demonstrate lower levels of social behavior, including social conflict management (Cook et al., 2010). According to the above, the failure to understand the emotions of others can lead to inappropriate patterns of response, which cause child victims to stand out and be at greater risk of victimization than their peers.

Schokman et al. (2014) concluded to the fact that students' ability to understand the emotions of others emerged as the only significant predictive factor in the development of social behavior. In fact, the ability to understand the emotions experienced by others, to socially react to them, is instinctively logical. While a person's ability to express, use, and manage his emotions may be related to his social behavior, it is his ability to understand and consider the emotional state or feelings of others that allow him to function supportively (Drigas and

Papoutsis, 2020). However, the ability to understand the emotions of others depends on the ability to recognize those emotions and is linked to the management, control and also use of the emotional information. Consequently, the emotional intelligence plays a certain role promoting various types of social behaviors. In particular, in the research of Schokman et al. (2014), women showed higher levels of prosocial behaviors, although no gender differences were found in emotion understanding. Furthermore, the results suggest that adolescents with higher levels of emotion understanding, especially females, are more likely to understand the mood or emotional state of their peers and offer support to them when needed. In bullying situations, the development of prosocial behaviors can manifest through the anticipation of victimization situations or intervention before bullying incidents occur (Schokman et al., 2014).

5. Emotional Intelligence and roles in bullying incidents

Studies of the international literature, which dealt with the relationship between emotional intelligence and bullying, indicate the existence of a clear negative correlation between the two variables. More specifically, lower levels of emotional intelligence are found to be associated with incidents of bullying. However, differences are observed, which depend on the one hand on whether the individual student has the role of the bully or the victim, and on the other hand on the high or low levels of emotional intelligence, which characterize each student. Specifically, the levels of the different dimensions of emotional intelligence help to distinguish between students involved and students not involved in bullying incidents as well as to distinguish between victims and bullies, in the case of students involved. In fact, the results of related research showed that both perpetrators and victims are characterized by high levels of attention and low levels of clarity and recovery (Canas et al., 2020; Casas et al., 2015). Estevez et al. (2019) showed that the emotional profile of victims is characterized by high levels of attention and low levels of clarity and recovery, a fact that complicates further the victimization process.

On the other hand, abusers are characterized by a deficit in their ability to restore their emotions (emotion regulation) (Chaidi, Driags et al., 2021). These are results, which are in line with previous research, such as Baroncelli and Ciucci (2014), which showed that as the levels of bullying increase, the levels of evaluation of one's emotions decrease. In contrast, Lomas et al. (2012) concluded that perpetrators are characterized by a limited ability to recognize the emotions of others, while victims are characterized by low levels of emotion management. Likewise, Baroncelli and Ciucci (2014), Schokman et al. (2014) and Lomas et al. (2012) found that victims of bullying incidents are characterized by lower levels of emotional control and use of their emotions. The control and use of emotions is understood as the ability to regulate and modify emotions according to the circumstances in which the individual finds himself (Drigas and Papoutsis, 2020). In addition, it was found that the levels of understanding of the emotions of others are significantly lower in the case of students who exhibit bullying behaviors (Lomas et al., 2012). On the contrary, the study by Garaigordobil and Onederra (2010) focused on Epstein's (2001) model and showed that students characterized by higher levels of constructive thinking receive higher levels of positive behaviors and lower levels of negative behaviors from their peers, showing a lower rate of bullying behaviors and a lower

rate of aggression. Corresponding conclusions emerged from the study by Gebbia et al. (2012), who identified low levels of emotional intelligence in the case of bullies.

In a slightly different context, Gower et al. (2013) concluded that girls who have been bullied are more likely to behave violently towards others, in other word victims can become perpetrators. On the other hand, Baroncelli and Ciucci (2014), in agreement with other researchers, such as Baldry et al. (2016), showed that students can be involved in both traditional bullying incidents and cyberbullying incidents, assuming multiple roles. The following table summarizes the studies in the international literature that studied the correlation between emotional intelligence and school bullying.

Table – Studies on emotional intelligence and school bullying

	Emotional intelligence scale	Intimidation scale	Sample	Results
Baroncelli and Ciucci (2014)	EIS	Questionnaire of 11 questions	529 students with an average age of 12 years	In traditional bullying, students are perceived as lacking emotional intelligence skills. Victimization is negatively related to emotion regulation and use.
Canas et al. (2020)	TMMS-24	Violent Behavior Scale / Peer Victimization Scale	1318 students with an average age of 13 years	Bullies and victims have lower levels of clarity and emotional recovery, compared to students not involved in bullying situations.
Casas et al. (2015)	TMMS-24	School Climate Scale	2806 students 1318 students, average age 13 years	Dimensions of emotional intelligence are negatively related to bullying.

Estevez et al. (2019)	TMMS-24	Peer Victimization Scale / Violent Behavior Scale	1318 students, average age 13 years	Victims demonstrate higher levels of attention and lower levels of emotion understanding and regulation. Abusers are characterized by a deficit in emotion regulation.
Garaigordobil and Onederra (2010)	CTI	School life checklist	248 students aged 12-16	Emotional intelligence is negatively related to negative behaviors, bullying and aggressive behaviors.
Gebbia et al. (2012)	Bar-On Emotional Quotient Inventory – Youth Version	Revised Olweus perpetrator/victim questionnaire	361 students	Participation in bullying situations as a victim is reduced as interpersonal skills increase.
Gower et al. (2013)	Bar-On Emotional Quotient Inventory – Youth Version	Violence Prevention Project Scale	253 students with an average age of 15.5 years	Victimization predicts the perpetration of violence. The ability of stress management reduces the perpetration of violence. Social-emotional skills protect against violence.
Lomas et al. (2012)	SUEIT	Peer Relations Questionnaire	68 students with an average age of 13 years	Low levels of perception of others' emotions are related to bullying. Low levels of emotion management and control are associated with victimization.
Schokman et al. (2014)	SUEIT	Short version of Rigby and Slee's (1991) victimization scale	284 students aged 11 to 18 years	Victims are characterized by low levels of emotional intelligence and emotional control.

6. ICT's and School Bullying

The way people communicate with one another has changed as a result of technological developments such as cellphones, social media, and mobile applications. Teenagers today utilize tools like Instagram, Facebook, Messenger, Viber, Snapchat, and Whisper much more than they did ten years ago. They also use features like Whisper for really close-knit communication (Chaidi and Drigas et. al., 2022). Accordingly, cyberbullying today manifests in ways that were impossible or unusual a few years ago. The definition of cyber bullying is considered as the use of internet, smartphones and other devices are used to email or post text or photographs, in order to humiliate or shame another person (Stathopoulou, Drigas et al., 2018). "When the Internet, smartphones, or other devices are used to email or post text or photographs meant to humiliate or shame another person," is the definition of cyberbullying. In research by the National Crime Prevention Council, it is said that more than 40% of US youths had experienced cyberbullying. This is particularly concerning because several studies have discovered that victims of cyberbullying frequently have mental and psychosomatic issues, and a British research discovered that bullying was a cause in nearly half of all teen suicides. These elements highlight the essential need to recognize all forms of cyberbullying, identify them, and eventually minimize their prevalence (Li and Qing, 2006).

Experiencing cyberbullying, physical harm, or sexual abuse can have a variety of detrimental effects, including poor mental and physical health as well as a decreased feeling of wellbeing (Juvonen, Jaana et al., 2000). It is well known that teenage academic success has a significant impact on future school decisions and, in turn, a long-term career (Juvonen, Jaana et al., 2000). Previous studies have shown that bullied and mistreated children and adolescents do worse in school than their peers who have not been subjected to abuse (Rothon, Catherine, et al., 211). This emphasizes the necessity of looking at both personal and environmental factors that affect kids' academic performance. The social environment has considerable significance for abuse victims since it may assist to protect the adolescent's development from various harmful effects of the abuse and may even have a favorable impact (Killen, Melanie, et al., 2009). The opposite is also true: a hostile educational environment may retard personal growth (Killen, Melanie, et al., 2009). An increasing amount of research also demonstrates that those who engage in cyberbullying put themselves and others at higher risk of developing a wide range of mental health issues, such as depressed symptoms, suicidal thinking, and suicide attempts (Stathopoulou, Drigas et al., 2018).

The Theory of Reasoned Action was created as a tool in response to the aforementioned claims, guiding the prevention and intervention of cyberbullying practices. In their definition of cyberbullying, Heirman and Walrave (Walrave, Michel, et al., 2011) stated that it is deliberately injuring or damaging someone you personally know online or offline through the use of digital means such as the Internet or mobile phone". In their definition of cyberbullying, Heirman and Walrave (Walrave, Michel, et al., 2011) stated that it is deliberately injuring or damaging someone you personally know online or offline through the use of digital means such as the Internet or mobile phone". The models also featured empathy for victims of cyberbullying. The Cyberbullying Experiences Survey (Van Vianen, Annelies EM, et al., 2011) had participants fill out a cyberbullying perpetration scale that measures four different forms of cyberbullying: deceit, malice, public humiliation, and unwelcome contact.

The results throughout all four models revealed that lower empathy for cyberbullying victims predicted more favorable attitudes toward cyberbullying perpetration, higher intentions to

cyberbully predicted more frequent cyberbullying behaviors, and more positive feeling toward cyberbullying perpetration predicted higher intentions to cyberbully. Results throughout all four models revealed that lower empathy for cyberbullying victims predicted more favorable attitudes toward cyberbullying perpetration, higher intentions to cyberbully predicted more frequent cyberbullying behaviors, and more positive feeling toward cyberbullying perpetration predicted higher intentions to cyberbully (Stathopoulou, Drigas et al., 2018). Cyberbullying injunctive norms, such as the belief that peers approve of the activity, might predict the likelihood of malicious intents and unwelcome contact actions. The research shows that the TRA is a suitable framework for comprehending the act of perpetrating cyberbullying (Van Vianen, Annelies EM, et al., 2011). Furthermore, according to another study team, social networking sites serve as a fertile ground for bullies, making teenagers and young adults who use them vulnerable to assault (Chaidi and Drigas et. Al., 2022; Gatsakou, Drigas et al., 2022).

The team claims that it is simpler to identify linguistic patterns used by bullies and their victims using machine learning and to create criteria for automatically identifying cyberbullying content. The information utilized for this research was gathered from the question-and-answer website Formspring.me, which has a high concentration of bullying-related content. Using a web service called Amazon Mechanical Turk, the data was tagged. Additionally, a computer was programmed to detect bullying content using the labeled data and machine learning methods made available by the Weka toolkit. A C4.5 decision tree learner and an instance-based learner both had 78.5% accuracy in recognizing the genuine positives. In a small sample of Form spring data, we were able to properly identify 78.5% of the posts that involve cyberbullying by keeping track of the proportion of swear and insult terms inside a post. The final findings show that these characteristics reasonably identify cyberbullying in Form spring postings, but there is still much potential for improvement in this timely and significant use of machine learning to online data (Aboujaoude, Elias, et al., 2015).

In addition, a sizable portion of young people's interpersonal relationships take place online due to the increased popularity of social network communications. As a result, new hazards and concerns such as online grooming, cyberbullying, and stalking develop. Children aged 12 to 17 are the largest impacted demographic in this situation (eMarketer, 2013). A team has created a research agenda for a Facebook Watchdog program with the goal of pursuing the mission to detect the aforementioned risks to improve the situation. The research backs up the notion that danger indicators are derived using picture analysis, social media analytics, and text mining techniques trying to increase public knowledge about current assaults and support subsequent measures (Rybnycek, Marlies et al., 2013). More precisely, the creators outlined the open research topics needed to create a Facebook Watchdog app that will guard teenagers against bullying and grooming attacks. They recommended a modular approach that would make it simple to add additional Watchdog modules to make it easier for research groups interested in the area to exchange information. The creation of an assessment matrix based on weighted Facebook Watchdog modules is crucial (Chaidi and Drigas et. Al., 2022). Additionally, social workers and young people themselves are regarded to be necessary to participate in the growth process in order to make more accurate observations about human behavior. Last, but not least, the research team thinks the weighted assessment matrix provides a solid foundation for merging various image processing, text mining, and social analytics modules to identify online grooming and cyberbullying activity (Rybnycek, Marlies et al., 2013).

Last, but not least, a different study looked into the impact of more recent mobile apps. Features include regular image and video sharing, time-limited communications, and hyper online bullying in high school settings are discussed locally. Data analysis indicates that new app features significantly influence how cyberbullying occurs in School. The study discovered that variations in users' comprehension of ephemerally can result in situations where one side in a discussion has access to far more power than the other and can take advantage of this. Students are also more directly impacted by visual material since it may be used to support arguments or serve as proof, and as a result, they are trained enough to hold app makers responsible for the results of using their applications (Stathopoulou, Drigas et al., 2018). These results, according to the researchers, have deepened our comprehension of the intricate interactions between cutting-edge app features and online bullying in educational contexts and open the door for future app design improvements as well as intervention studies (Singh, Vivek K., et al., 2017)

The primary distinctions between internet bullying are: greater audience size, the possibility for more humiliation for the victim, the ongoing nature of victimization due to the widespread the prevalence of ICT's in daily life, the growing difficulty in identifying the perpetrator and the simplicity with which this power imbalance was created constructs (O'Higgins Norman, 2020). However, due to the substantial amount of the frequent overlap between online bullying and bullying at schools, further investigation is required to determine the extent to which risk and protective factors may differ in how they impact each other, or even when both problems co-exist (Cosma et al., 2020; Kowalski et al., 2019).

7. Conclusion

Concluding we have to highlight the role of digital technologies in education domain that are very productive and successful, facilitate and improve the assessment, the intervention and the educational procedures via Mobiles [90-103], various ICTs applications [104-141], AI & STEM ROBOTICS [142-156], and games [157-165]. Additionally the combination of ICTs with theories and models of metacognition, mindfulness, meditation and emotional intelligence cultivation [166-215] as well as with environmental factors and nutrition [86-89], accelerates and improves more over the educational practices and results for self-control and emotional balance, although sometimes digital technologies are the vehicle for bullying.

Moreover it is emerged that emotional intelligence is associated with lower levels of involvement in bullying behaviors, since students with higher levels of emotional intelligence are those who participate lesser in bullying incidents, either as perpetrators or as victims. Although bullying is a complex and multi-causal phenomenon, it appears that the development of adequate emotional skills has a positive effect on students' non-involvement in bullying incidents. From the review of the relevant literature, it emerged that students who participate in bullying incidents do not face significant difficulties in the perception and expression of emotions, but they have difficulties in understanding and regulating their emotions. In particular, both the perpetrators and the victims seem to lack the required skills to manage or regulate their emotions. A possible and interesting interpretation for this conclusion may be related to the ability of the bullies to perceive emotions, which makes them able to identify the

victims, for example, their classmates who they consider vulnerable and to acquire a dominant role in the respective school group. Moreover, the assessment of students' emotional intelligence levels can contribute to the prevention of bullying situations, thus improving intervention programs, acting as a protective and deterrent factor. As a result, this should be considered when developing the school program. Overall, the review of the relevant literature carried out highlighted the importance of highlighting students' emotional competences reducing the level of bullying and promote adequate personal development, always considering the existing differences between the emotional competences of boys and girls.

According to one definition of cyberbullying, it is "an aggressive act or behavior that is carried out by a group or a person repeatedly and over time against a victim who cannot readily defend himself using technological means" (Smith, P.K., et al., 2008). Cyberbullying is thus an organized abuse of power that takes place via the use of information and communication technology. Recent research has looked into cyberbullying using a variety of more targeted media. They list the top seven media forms that secondary school students use, including text messages, chat rooms, websites, picture/video bullying, and cell phone calls (Slonje, Robert et al., 2013). When victims are successful in defending themselves, the detrimental psychological repercussions are lessened. But when a victim receives no support or assistance, the phenomena can become exceptionally harmful, with extremely corrosive effects on the victim's mental health (Aluede, Oyaziwo, et al., 2008). Victims of cyberbullying frequently struggle with uncontrollable unpleasant emotions that have an impact on their well-being and social influence at school and in general (Ortega, Rosario, et al., 2009). Additionally, studies showed a connection between suicide thoughts and victimization due to bullying in person or online (Hinduja, Sameer et al., 2010). Furthermore, victims of cyberbullying frequently report experiencing academic difficulties as a result of their obsession with the incident. Students showed a sharp decline in their grades, a rise in absenteeism, anxiety over social isolation, and the emergence of the notion that school is no longer a secure place. Increased feelings of dissatisfaction with the bully and the circumstance among victims can be linked to declines in academic performance (Tokunaga, Robert S. et al., 2010).

8. References

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