



José Luis González, Juan José Leiva y Antonio Matas. *Concepción pedagógica de los conflictos TIC en centros escolares de la provincia de Málaga (España)...*

Concepción pedagógica de los conflictos TIC en centros escolares de la provincia de Málaga (España): Una apuesta por la mediación

Pedagogical conception of ICT conflicts in schools in the province of Malaga (Spain): A commitment to mediation

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RESUMEN.

Los comportamientos indeseados utilizando las Tecnologías de la Información y de la Comunicación (TIC), generalmente con la telefonía móvil, están siendo una preocupación en los centros educativos de nuestro país. Con el fin de afrontar esta situación se está desarrollando y aplicando nuevas estrategias que promueven la convivencia en positivo como es la mediación entre iguales.

El objetivo de la presente investigación es analizar como perciben los conflictos TIC estudiantes de Secundaria Obligatoria (ESO). Se ha llevado a cabo un estudio de encuesta a partir de un cuestionario tipo Likert, Cuestionario de Violencia Escolar (CUVE-R) sobre percepción de conflictos. La muestra está formada por 1069 estudiantes de distintos centros educativos de Málaga. Los resultados, indican la existencia de un nivel significativo de la conflictividad TIC entre el alumnado y en menor medida del alumnado hacia el profesorado, siempre desde la óptica del alumnado. Se concluye que la violencia TIC, puede ser abordada con la implementación de la mediación escolar, estrategia que se propone como procedimiento apropiado para la gestión positiva de conflictos. Los principios fundamentales de la mediación son los mismos: voluntariedad y libre disposición, igualdad de las partes, neutralidad de las personas mediadoras y confidencialidad. En el presente trabajo no incluimos conducta de ciberacoso al considerar estos autores que dicho conflicto, es el más grave de los posibles y no admite mediación escolar entre iguales por no soportar el principio elemental de igualdad entre las partes, aunque puede ser la mediación una buena estrategia proactiva contra el ciberacoso.

PALABRAS CLAVE.

Convivencia escolar. Redes Sociales; Tecnologías de la Información y de la Comunicación (TIC); violencia T.I.C. percepción de conflicto. mediación escolar.



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ABSTRACT.

Unwanted behaviour using Information and Communication Technologies (ICT), generally with mobile phones, is a concern in schools in our country. In order to address this situation, new strategies are being developed and applied to promote positive coexistence, such as peer mediation.

The aim of this research is to analyse how ICT conflicts are perceived by students in Compulsory Secondary Education (ESO). A survey study was carried out using a Likert-type questionnaire, the School Violence Questionnaire (CUVE-R) on the perception of conflicts. The sample consisted of 1069 students from different schools in Malaga. The results indicate the existence of a significant level of ICT conflict between pupils and, to a lesser extent, between pupils and teachers, always from the pupils' point of view. It is concluded that ICT violence can be tackled with the implementation of school mediation, a strategy that is proposed as an appropriate procedure for positive conflict management. The fundamental principles of mediation are the same: voluntariness and free will, equality of the parties, neutrality of the mediators and confidentiality. In this paper we do not include cyberbullying behaviour as these authors consider that this conflict is the most serious of all possible conflicts and does not admit school mediation between peers as it does not support the elementary principle of equality between the parties, although mediation can be a good proactive strategy against cyberbullying.

KEY WORDS.

School coexistence; social networks; Information and Communication Technologies (ICT); I.C.T. viólense; conflict perception; school mediation.

1. Introduction.

It is in the decade of the nineties of the last century when the concept of coexistence is preached from an integral prism whose objective was to address the problems of conflict and propose solutions to the new situations that have arisen in educational centers and outside them. Certainly, in recent years we observed how school coexistence projects a high level of deterioration in our schools (Merma-Molina et al., 2019; Fernández-Guerrero et al., 2021). The different educational administrations have significantly increased the proposals of educational programs and projects that pursue the improvement of the school environment, promoting the prevention of school conflicts, causing an important change (Andrades-Moya, 2020; Costa et al., 2020; Villanueva-Sierra & Criado-Avellaneda, 2021).

Good relations between members of the educational community generate an environment of harmony that positively stimulates the school performance of Toscano et al. students, (2019). Sometimes the term coexistence has carried a certain nuance of imprecision (Fierro-Evans & Carbajal-Padilla, 2019). Now, we want to reaffirm ourselves in the position of Uruñuela, (2018) to avoid these terminological ambiguities, we must talk about positive coexistence and not positive coexistence, since positive school coexistence requires a contextual, peaceful and inclusive concord while respecting human rights (Ascorra et al., 2016). While, if we talk about positive coexistence, pedagogical approaches of the moment prevail that always go behind facts and also do not project anything in the future educational plane.



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In the educational environment, the improvement of the school environment involves active students as an essential unit, capable of understanding and attacking situations of conflict in the center and their transformation through dialogued solutions (Sánchez et al., 2019). Delors in his report (1996) focuses on the process of coexistence as the axis of teaching to prevent not only conflicts but also school dropout and failure. Society demands holistic pedagogical experiences for our students where the existing violence is not captured by teachers, ignoring the seriousness of conflict situations (Rizo & Picornell, 2017).

The balance of coexistence can be fractured by different ways: offenses, physical punishments, emotional abuse, machismo, etc. (Galtung & Dietrich, 2013) and with a varied compendium of conflicting behaviors. Brandoni, (2017), Vizcarra et al., (2018), Medina & Villarreal, (2019), Garaigordobil, (2019), Zepeda, (2020), in their studies argue diverse and varied types of school conflicts, which negatively affect young people who externalize low self-esteem (Ormart, 2019). Generally, violence is a culturally learned procedure that has directionality and seeks an end: to control, impose, manipulate or intimidate (Campos et al., 2015). In our case, the abuse of power and inequality among students are the bases of this school violence (Torrejo, 2006, Garaigordobil & Oñederra, 2010).

Misconduct in school environments is usually classified by teachers as structural problems since the origins of this violence address multicausal sources exogenous to the educational environment (Uruñuela, 2018) and therefore should not be treated as isolated events. Therefore, they require decisive educational strategies that attenuate the deficient environment of school coexistence.

In our analysis, we propose the existence of a school conflict when a behavior or omission of this, intentionally carried out, causes harm to another member of the educational community, whether student or teacher (Álvarez-García et al., 2008). The behaviors that disturb coexistence in the classrooms could be classified as follows (Dobarro et al. 2016): physical, direct or indirect violence, verbal, direct or indirect violence, social exclusion, disruption, violence through ICT and student teacher violence.

One of the most worrying behaviors that occur in the classroom are the disruptive behaviors generated by certain students (Jurado de los Santos et al., 2020). The causes of this disruption are varied, from occasional situations to the existence of students with behavioral disorders. When pushing, kicking, and fighting arise between students, usually outside the classroom and in times of recess, we speak then of direct physical violence. Thus, there is also indirect physical violence, when the damage is caused to the belongings of students and teachers or real estate and materials of the center (Campos et al., 2015, Estrada & Mamani, 2020). This type of indirect physical violence, some research concludes that this type of violence exists in primary education courses (Zúñiga et al., 2019), with students aged between 10, 11 and 12 years.

Similarly verbal violence, nicknames, offending a student or teacher, rumorology or speaking ill of a member of the community. It can be done in person, we will then talk about direct verbal violence and non-presence, we talk about indirect verbal violence and can be directed towards teachers (Nieto et al., 2018). The increase in this type of direct and indirect verbal violence is taking on alarming features in gender relations, Domínguez-Alonso et al., (2019).



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Social exclusion is another type of violence that arises as a result of the massive arrival of the migrant population. Research such as that of Pachter et al. (2010), Brandoni, (2017) and Cabero, (2016) reflect on the indicators relevant to social exclusion. The level of education of parents, place of residence, nationality, religion, ethnicity, clothing, physical appearance are causes of social and educational segregation. Rizo-Arias (2019), explains analyzing the data obtained in his research, that these indicators are elements that continue exclusion and educational segregation. The most significant exclusionary manifestations within the school are carried by economic factors of the families (Escarabajal et al., 2015) and can be focused not only within the school, but also when students meet in gangs or in the same social networks the exclusion is present.

The prevention of school violence requests a general action of the educational administration on coexistence and admitting, therefore, that violence is part of the very negative vision of school coexistence (Rosario Ortega-Ruiz et al., 2016).

With regard to our research focused on ICT violence, generally the use of mobile telephony by students can be the cause of behaviors classified as violent. Always through electronic means, connecting to social networks on the Internet where the abuse of power is present in certain members of the group (Domínguez-Alonso & Portela, 2020). Such violent behaviors using ICT instruments are varied, sending images, recording videos of students fighting or teachers during their classes (Dobarro et al., 2016). On many occasions these videos go viral causing irreparable damage.

All these references on school conflicts are considered within the objective of this research. It focuses on the analysis of violence through ICT from the perspective of students. Thus, the general objective is to check the degree of perception by ESO students, in terms of the use of ICT as a conflict-generating instrument directed towards students and teachers. We propose as a preventive instrument of positive conflict management the school mediation between equals. Mediation is a tool where the students participating in the process are involved to achieve the interests and needs pursued in a self-positive way. It is based on the principles of voluntariness of the students involved. Neutrality of the student mediator, the mediators do not take sides with any of the parties and confidentiality of all those involved in the process, which means that what is spoken in the mediation process should not be commented on outside it. Active listening is the vector of success of the process where students in conflicts reach agreements on their own based on their decisions made freely, enhancing the moral development of students since it is a self-positive procedure (Boqué, 2018; Moreta, 2018).

Our research excludes these situations of harassment and cyberbullying. It is the most serious manifestation of school violence, with not only educational but also legal implications (Cutrín et al., 2017; Gallego et al., 2019).

Peer mediation is often defined as an alternative procedure or method where a neutral third person helps the parties in dispute to negotiate and reach agreements, this being self-positive (Boqué, 2018).. In the mediation process, continuous active listening techniques are used (Torregó, 2019). That is why we can affirm as Boqué (2018) maintains that the characteristics of the mediation process are summarized in the following indicators: prevention, voluntariness, confidentiality, freedom of decision, self-composition, empowerment, absence



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of power in the mediators, cooperation to satisfy the interests of both parties, ethics since values associated with the culture of peace are developed.

2. Methodology.

Our research has been carried out applying a type of quantitative methodology based on the administration of the validated questionnaire of school violence CUVE-ESO, (Dobarro et al., 2016) applicable to students of secondary education even of baccalaureate. We can affirm that under the quantitative approach, the relationship between theory, research and reality is based on the coincidence between the researcher's perception of reality reflected in a hypothesis and reality as a phenomenon for a theory to be approved (Del Canto & Silva, 2013). For the processing of information we have used JASP statistical software in updated versions. The questionnaire aims to discover and analyze what is the perception of students about the frequency of appearance of different types of school conflicts both between them and those directed towards teachers.

The incidental sample of 1069 ESO students, belonging to five public and private schools in the province of Malaga, three belonging to urban areas and two belonging to rural areas. The distribution by sample courses in Table 1.

Table 1. Percentage of Participation by Courses

Levels	Counts	% of Total
1º ESO	297	28 %
2º ESO	267	25 %
3º ESO	232	22 %
4º ESO	273	26 %

The CUVE3-ESO takes the form of a Likert scale composed of 44 items with a scale of 5 answer options: 1 "Never", 2 "Few Times", 3, "Sometimes", 4 "Many Times" and 5 "Always". The questionnaire previously explained to students can be applied so that they respond in 20 or 25 minutes. For students who have a difficulty in reading comprehension, the teacher in charge of applying it can help them and increase the response time.

The variable of the analysis, school violence through ICT (VTIC) contains the subscales shown in Table 2.



Table 2. Subscales of the VTIC variable

Subscales VTIC	
vtic1	There are students who send their classmates through email, of offenses, insults or threats.
vtic2	Some students record or take pictures of classmates.
vtic3	There are students who post comments on WhatsApp, Facebook, Instagram, of offense, insult or threat about classmates.
vtic4	Students post offensive photos or videos of classmates online
vtic5	There are students who record or take photos of classmates with their mobile phones to threaten or blackmail them.
vtic7	There are students who record and take pictures of teachers with their mobile phones to make fun of them.
vtic7	Certain students post comments on WhatsApp, Facebook, Instagram of offense, insult or threat to teachers.
vtic9	Some students send messages on WhatsApp, Facebook, Instagram. of offense, insult or threats.
vtic9	Students post offensive photos or videos of classmates online
vtic10	Students post offensive photos or videos of teachers online.

Note. Fuente Álvarez-García et al., (2017)

The psychometric properties were analyzed by calculating Cronbach's alpha coefficient together with McDonald's omega coefficient to verify the internal consistency. We confirm that the latent structure of the measurement applying a factor analysis according to the structure of factors (Dobarro et al., 2016) that indicate that the adjustment of the model using the Chi-square indices in relation to its degrees of freedom, RMSES, SRMR, TLI and CFI (Kaplan, 2009; Hormigo, 2014; Shi et al., 2018). Each participant's scores for the VTIC factor were then calculated. Based on these results, the response profile of the participants was analyzed in a descriptive way to analyze the perception of the frequency of this behavior of school violence through ICTs, following the objective of the study. Finally, the possible existence of differences in the appreciation of the appearance of this violent behavior was explored, depending on the gender and the course of the participants.



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3. Results.

The internal consistency coefficients for the VTIC global scale were 0.85 for Cronbach's alpha and 0.86 for McDonald's mega.

It is a certainty that electronic media are generating some concern in school environments. Regarding Violence through Information and Communication Technologies (VTIC) we observed that the average of the perceived frequency is intermediate (average = 1.45; SD=0.51) presenting a positive bias (1.95). The VTIC that, although the frequency is not very high, the highest is presented by vtic2, "some students record or take photos of classmates". This type of violence is usually carried out outside the classroom and that the difference with VTIC violence directed at teachers is less than that of students. It is concluded that most students have a low level of perception of VTIC among both students and students towards the faculty. In most cases these behaviors are not normalized among students, they are usually unusual and everyday as shown in figure 1.

The percentages of the subscales are shown in Figure 1.

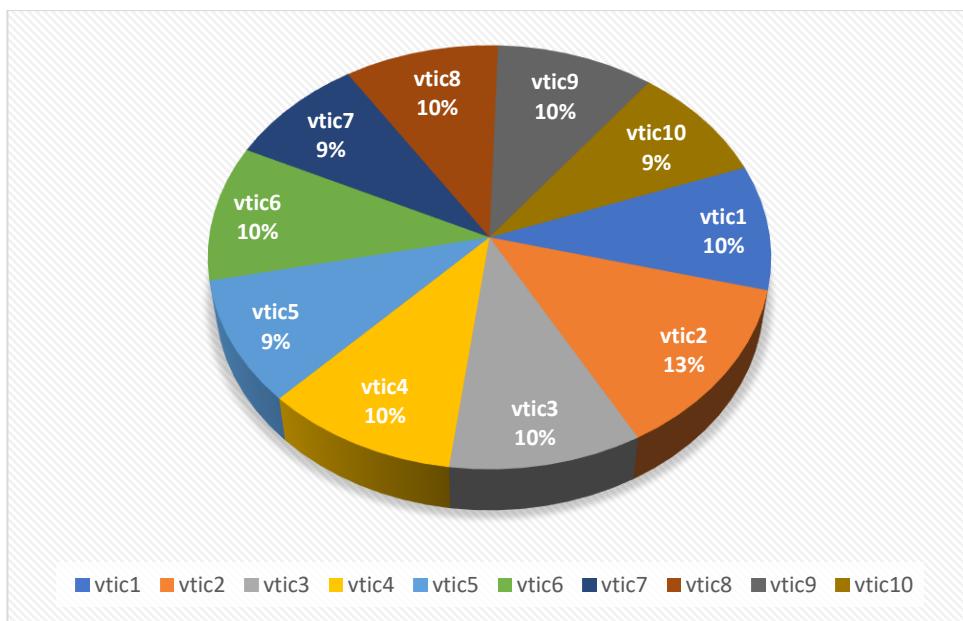


Figure 1. Percentages of the VTIC Factor

The relationship between all the subscales is positive, there are no outliers.

The confirmatory factor analysis on a ten-factor structure in the adjustment tests, a Chi-square value of 492.28 was obtained with 35 degrees of freedom, which supposes a Chi-square/degrees of freedom ratio of 14.06, which can be considered as an acceptable adjustment. The same goes for the adjustment indices RMSEA=0.11 and SRMR=0.06, which indicate an acceptable fit. On the contrary, the indices suggest a low adjustment. Taking into account all indices, a moderate, but acceptable, adjustment is assumed. It highlights that the minimum score is 1 and the maximum of 5 points, presenting a slight negative bias (-0.109).



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Another aspect to consider is the existence of possible differences between genders. Since in the distribution of the dimensions they cannot be considered normal (the Kruskall-Wallis test was applied) the results did not show significant differences depending on the gender of the participants at a confidence level of 99% in all subscales except vtc2 and vtic6. Thus, a significant difference was obtained at a significance level of 0.05 of the subscales the dimension of VTIC. So with these results we consider that if there is enough evidence to consider that there are differences between students.

In the next phase of the analysis process, the possible differences between courses were investigated, which means analyzing possible differences depending on age. In this case, there are also no significant differences as can be seen in the Kruskal-Wallis test in Table 8. In vtic5, the dimension of VTIC was obtained at a significance level of 0.05 of the subscales. So with these results we consider that if there is enough evidence to consider that there are differences between students in these subscales.

To investigate the differences in particular, descriptive statistics of the mean, standard deviation by course and subscales were calculated.

These results of the subscales present a common pattern in the form of an inverted arc consisting of a lower average value in the first course, to experience an increase in second and third and to go back down in the fourth course. The differences are statistically significant, although the effect sizes are relatively low.

We highlight the subscales of the VTIC factor in 3rd year of ESO, all of them focused on ICT violence among students. Thus, vtic2, some students record or take photos of classmates with the mobile to mock, (with an average of 2.06) vtic3, there are students who publish comments on Instagram, Facebook or WhatsApp of offense, insult or threat about classmates (with an average of 1.77) vtic4, certain students publish on Instagram, Facebook or WhatsApp comments send classmates messages of offense, insult or threat (with an average of 1.66) and vtic6, there are students who record or take photos of teachers with their mobile phone to mock (with an average of 1.60) all of them close to or above the average value. The minimum score is 1 and the maximum is 5.

In the light of the results, it is concluded that most students have a low level of perception of ICT violence among both students and students towards teachers. In most cases these behaviors are not normalized so they are not usually common. With the results obtained in the study, the initial general objective was to quantitatively analyze the perception that students have of ICT violence existing in the stage of compulsory secondary education (ESO). It is significant that without being an alarming conflict, the use of mobile phones and social networks frequented by students is in itself a source and means of conflict, generating spaces of toxic relationships between them. However, the subscales related to the teaching staff vtic6, "there are students who record or take photos of teachers with their mobile phone to make fun of themselves", vtic7, "certain students post comments on Instagram, Facebook or WhatsApp of insults or threats to teachers" and vtic10, "students post on the internet offensive photos or videos of teachers or professors" gave insignificant results.



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4. Discussion.

It should be stressed that the size of the sample and its representativeness minimizes the possibilities of generalization and scope, although the scale of psychometric values is acceptable. In this sense, we know that the sample of 1069 has its limitations and could be much larger, but obtaining authorization in schools is becoming more and more complicated and it is not easily obtained. In fact, we have taken into account that the sample of 1069 students may be much higher, but obtaining authorization in schools is increasingly complicated and authorization is not easily obtained. We intended to increase it between the courses 2019-2020 but the pandemic situation and access to centers with students in telematic teaching has made the increase in registrations unfeasible.

Our starting point is to analyze coexistence from conflicts that begin to be common in our educational centers and that deteriorate in the classroom environment. Many improvement projects are implemented without a prior analysis of the state of the conflict existing in the centers and therefore end up in many occasions in scorched earth projects being a failure in the centers where it is tried to propose. (Sánchez García-Arista, 2018).

ESO centres are a focus where violence is generated, which very possibly has its origin in social and family environments (Pazo, 2020). The violence generated in social, family and school contexts negatively results in the academic performance of students, sometimes being a sufficient cause for early abandonment of the educational system and the consequent school failure (Álvarez-Gómez, 2019; Zepeda, 2020).

The findings lead us to consider that, although the level of uses of ICT is increasing, violence caused by electronic media and social networks is not a conflict for now worrying in our centers, as evidenced by other studies comparing it with ours (González-Carcelén & Gómez-Mármol, 2019). It has observed that toxic behaviors with ICT can lead to cyberbullying, a problem that is very difficult to detect (Ortega-Ruiz & Córdoba-Alcaide, 2017). Students exposed to violence through ICTs decrease their ability to integrate into their environment as argued in their study Sandoval et al, (2017). On the other hand, in other studies carried out (Domínguez-Alonso & Portela, 2020) there has been a higher incidence in the male gender than in the female gender, presenting the students with statistically significant differences when recording or taking photos with the mobile to mock the classmates and the teaching staff, although other studies are not have found important differences between genders when analyzing violent behaviors through ICTs (Prendes-Espinosa et al., 2020).

The study reveals a clearly relevant component, and that is that contrary to what it might seem and this is how ICT violence is found in other studies, it increases in the last years of ESO; the same happens with another conflictive typology (Domínguez-Alonso et al., 2019; Medina & Reverte, 2019). The results are similar to those obtained in other studies carried out (Nieto et al., 2018 & Zúñiga et al., 2019) and make us reflect that there is no awareness that these behaviors are violent acts towards colleagues.

The proposal to reduce the levels of school violence and positive conflict management relevant to our criteria is peer mediation. We consider that both harassment and cyberbullying are not measurable conflicts as they do not conform to the fundamental principles of peer mediation, it must be addressed through other channels applying the existing protocol procedures (Ortega-Ruiz & Alcaide, 2017).



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It requires the involvement of the management team and the educational team, as well as the training of students and teachers. The whole group benefits from this procedure since it is an emerging process that applies to the new circumstances that arise except in relation to bullying and cyberbullying. The great beneficiary of peer school mediation when ICT conflicts arise is the victim who sees his or her rights as somehow redressed.

The conclusion we reach with the results obtained is that the VTIC for now does not stand out from the rest of the school conflicts such as disruption, verbal violence, physical violence or exclusion. Their average is below these conflicts. It should be noted that the reports obtained from the VTIC subscales have the greatest impact is vtic2, "some students record or take photos of classmates", with 13% of students perceiving this conduct. The rest of the VTIC subscales range between 9% and 10% of students who perceive some behavior described in Table 2.

Mediation based on the principles of voluntariness, equality, confidentiality, presupposes a preventive action co-responsibility and participation, inclusion and even the recognition of the authority of the teaching staff when they participate in their promotion, (Bueno, 2018; Rotila, 2019). Mediation is based on dialogue, empathy, commitment and responsibility, inescapable determinants for the improvement of the educational environment. Undoubtedly, it results in the improvement of the social skills of the students. It contributes to greater involvement of students in the center and decreases the number of disciplinary files (Torrejo, 2018; García-Raga et al., 2019). The existence of programmes and projects to improve coexistence based on mediation are increasingly valued, but there is no backbone to promote this conflict management procedure in schools. Hence our proposal to implement this tool in educational environments with common guidelines and appropriate teacher training. It is a question of weaving modern formulas for motivation and learning towards peaceful coexistence that offers real possibilities for personal and interpersonal growth to students who must be autonomous and responsible in the resolution of conflicts.

In short, it is about actively articulating a culture of peace based on mediation and learning assertiveness, conceived as an opportunity for the promotion of pedagogical, innovative bridges and for educational inclusion.

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