The Use Of ATLAS.ti In Investigating Bullying In Primary Schools In The City Of Tuxtla Gutiérrez, Mexico

Enrique Gutiérrez Espinosa, Hedaly Aguilar Gamboa, Verónica C. Castellanos León, Ileana del C. Carrillo González

Abstract

Based on an apparent increase of bullying cases among primary school students in the city of Tuxtla Gutierrez, Chiapas, México, research was conducted to identify the characteristics of the various forms of violence and abuse among children of this age group. The results of this research aided school authorities in implementing a prevention program that increased student awareness of bullying and encouraged them to denounce it in hopes of reducing this phenomenon. The subjects studied in the described research, were 117 fifth-grade boys and girls between the ages of ten and eleven. Subjects were observed to identify the different roles of this phenomenon such as bullies, victims, and bystanders, as well as the cause and effects of their behavior. Additionally, focus group activities were conducted to measure the subjects' awareness of the bullying phenomenon and sensitize them to it. In this study, both qualitative and quantitative methods were used to gather information about how the students experience this kind of violence between themselves. The instruments used for the qualitative phase were surveys, focus groups and individual interviews, which were digitized and analyzed using ATLAS.ti. The primary documents added to ATLAS.ti consisted of transcripts, video recordings and the survey data as individual documents per case.

Keywords

Bullying, children, students, education, ATLAS.ti

Introduction

In México, as well as in other countries, girls and boys have been exposed to various forms of violence that affect and violate their rights as individuals, including violence outside the home, which is predominantly carried out in schools. This has been identified as the social phenomenon known as bullying when performed in person, or as "cyberbullying" when carried out by any type of electronic or digital means.

Documented cases of bullying indicate that roughly two-thirds of the children in Mexican primary schools say they have experienced at least one physical attack during the past two years. The most frequent attacks reported among young boys included kicking and punching, whereas young girls reported mostly shoving and hair-pulling. Only 33.9% of girls and 25.5% of boys reported that they had suffered no physical aggression at school. When questioned about their home life, 10.6% of boys and 7.7% of girls between fourth and fifth grade indicated their fathers hit them, while 13.5% of boys and 12.1% of girls indicated it is their mother who hits them. In schools, the largest number of attacks are perpetrated by the children themselves. The data indicates that the frequency of boys and girls becoming victims of bullying is almost equal.

The first data on the bullying phenomenon in México were collected as part of two separate Youth and Children Surveys, conducted at two different times by the Federal Electoral Institute. The first survey was conducted in the year 2000, and the second in 2003. The results of this surveys indicated that 32% of those under 15 claimed to be victims of abuse at school; more than 15% reported verbal abuse, and 13% reported being victims of a physical attack by their peers. In late 2008, the study findings of the National Institute of Pediatrics of México confirmed that bullying among students was increasing, and according to the National Human Rights Commission of México, from 2011 to 2013, bullying among

students rose from 30% to 40%. Additionally, when the Organization for Economic Cooperation and Development (OECD) conducted the Teaching and Learning International Survey (TALIS), startling statistics indicated that school-age bullying in Mexico is above the average among nations studied by the OECD. These facts have been the basis of several studies conducted by different organizations, government agencies and higher education institutions in hopes of understanding the cultural changes that have affected and thus modified behavior among school-age children and intensified the bullying phenomenon. Elementary schools in the city of Tuxtla Gutierrez, the state capital of Chiapas in México, are not an exception. Based on the alleged increase of bullying cases among primary school students, a research group from the University Autonomous of Chiapas, conducted a study in the school year 2012-2013 to further explore the incidence of abuse and violence among peers in elementary schools and to learn how the children have experienced this kind of violence. The aim of the study was to identify bullying cases and the role of each child involved, such as bullies, victims and bystanders, as well as the causes and effects of their behavior to identify possible solutions to prevent and avoid this phenomenon.

The research questions were as follows:

- Which are the most frequent causes of students been attacked or excluded by others?
- What are the consequences that follow after an aggression to a student is done?
- What are the causes of the bullying cases at the school?
- What are the available solutions in order to have a better relationship between students and a better school environment?

Method

The study was based on a non-representative intentional sample (Miles and Huberman, 1994) with 117 fifth grade boys and girls between the ages of 10 and 11 from an elementary school from Tuxtla Gutiérrez, Chiapas, México. Both qualitative and quantitative data was collected over a period of six months. The data base consisted of surveys, focus groups and interviews. Further we engaged in non-participant observations and wrote field notes. The main focus of this paper is on the qualitative part as we want to show how a computer-aided qualitative data analysis software (CAQDAS) supported us in the process of analyzing the data. We would like to point out that we were novices in using the software.

The study consisted of two parts, identifying the problem and developing a prevention program. In order to measure the awareness of bullying and to learn about the various roles pupils play, we conducted a survey. The second part of the study consisted of a five sessions prevention program to sensitize and increase the awareness of students about the meaning of bullying and to detect cases of bullying. Some of the sessions were recorded on video to capture the students emotional and physical responses when they were talking about bullies and victims. As part of the first session of the prevention program, each student wrote his/her own diary, and at the end of each session, the students were given times to write down their thoughts, feelings and opinions about the session. As part of the activities, three focus groups (FG) were audio recorded, and detailed field notes were written. The focus groups consisted of playful

activities to allow children to speak out and to express their own opinions. The results of the quantitative analysis from the survey provided input to create a set of themes that were used in the dialog with the students in the focus groups. All of these data, i. e., transcripts of individual interviews, student diaries, observation and field notes were added to ATLAS.ti for further analysis.

Preparing The Data

The preparation of the data included converting all handwritten observations and field notes to computer files and to transcribe the audio recordings. A total of 258 source files were added to ATLAS.ti:

- 117 surveys, identified with the tag [Participante#].
- 3 focus groups, tagged with [Grupo#] to identify the group of children in each one.
- 117 student diaries, labeled as [Diario#] corresponding to each student who wrote it.
- 21 individual interviews, with the label [Entrevista_Ind#].

The symbol # is a consecutive number by which we could identify each boy and girl and the groups they participated in. The list with the numbers and names were stored in a separate document to ensure anonymity.

The Analysis Process With The Three-stage Method "CAER"

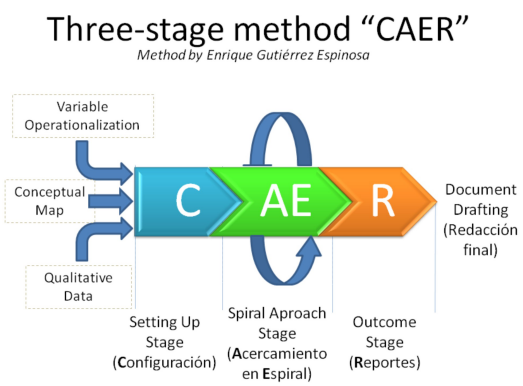

Figure 1: The three-stage method "CAER" used for the analysis process in ATLAS.ti

The ATLAS.ti analysis process followed a three-stage method called, "CAER"[1], shown in Figure 1. "CAER" is an acronym formed of the Spanish word "Configuración - Acercamiento en Espiral – Resultados," meaning "to fall" in English. If we look at the analysis process as the form of a spiral, and start the analysis at the top of the spiral, every time a round is made going down the spiral, the cycle gets shorter and shorter each time that the analysis does a round down the spiral. If we compare this with the coding, quoting and memo writing, we will notice that this process is going to be cyclic when doing textual and conceptual analysis, until there is no more analysis to be done.

The first stage in the analysis process is to to operationalize variables in form of categories and their properties. The reason for this is to increase the quality of the expected results. The predefined categories and their properties guided the development of the code list.

1 Gutiérrez Espinosa, E. (2011). *El método CAER para análisis de datos*. Unpublished manuscript.

Categories of analysis	Properties
Causes of attack and exclusion.	Causes of attack. Causes of exclusion. Consequences of aggression.
Characteristics and behavior of attacked and excluded students.	Characteristics of attacked students. Behavior of attacked students. Characteristics of excluded students. Behavior of excluded students.
Characteristics and behavior of students who attack or exclude.	Characteristics of students who attack or exclude. Behavior of students who attack or exclude.
Characteristics and behavior of students who follow.	Characteristics of students who follow. Behavior of students who follow.
Characteristics and behavior of students who watch.	Characteristics of students who watch. Behavior of students who watch.
Available solutions to improve relationships and school environment.	Solutions to improve relationships. Solutions to improve school environment.

Table 1: Predefined categories and their properties

Secondly, a conceptual map was developed. Conceptual maps are an excellent social science strategy to organize and understand the relationship between all concepts involved. It is graphically represented in form of a diagram. In ATLAS.ti, it can be represented in the form of a network view. The conceptual map allowed us to establish relationships between the analysis categories and the associated concepts.

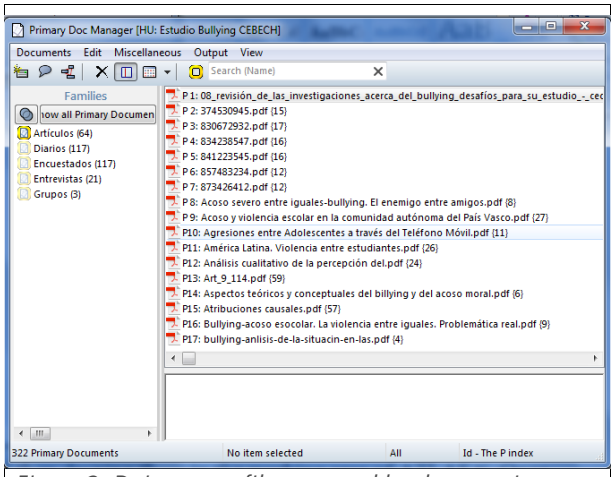

Figure 2: Data source files grouped by document families

Setting-Up Stage

This stage refers to the tasks related to setting up a project in ATLAS.ti. After creating a Hermeneutic Unit (the ATLAS.ti project file), all primary data sources were added as primary documents. In addition, we added 64 research articles to the project as well. All documents were grouped into five document families: research articles (64), survey data (117), diaries (117), interviews (21) and focus groups (3).

Next, the conceptual map was added in form of a network view. By way of creating it, first a-prior codes were added to the project that were used in the first phase of the analysis (Table 2):

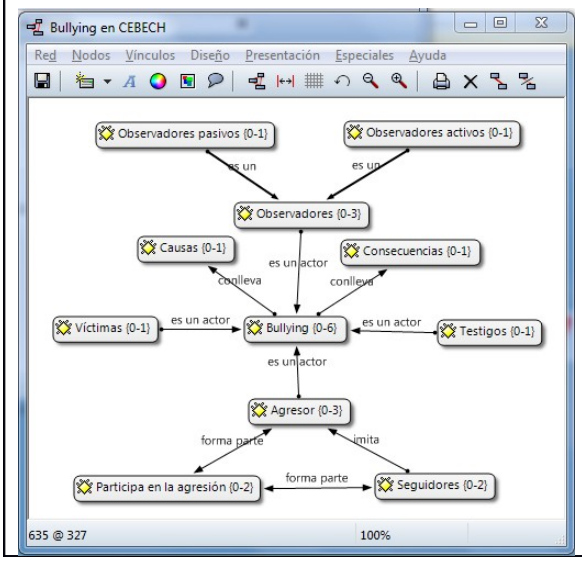	1. Agresor 2. Bullying 3. Causas 4. Consecuencias 5. Observadores 6. Observadores activos 7. Observadores pasivos 8. Participa en la agresión 9. Seguidores 10. Testigos 11. Víctimas

Table 2: Conceptual map as network view in ATLAS.ti and a-prior codes

Spiral Approach Stage

The main stage of the "CAER" method is the Spiral Approach stage. As explained before, the analysis process is performed by doing rounds of textual and conceptual analysis of the source data by creating quotations, adding codes, writing memos and creating links as they emerge. During the analysis process, within every round, the coding schema was refined, because, as was needed, some new codes were created, other codes were renamed, a few were deleted, and some others were merged. In the present study, we went through five rounds at the spiral approach state. Each round corresponded to five document groups that were created at the setting-up stage.

At first we analyzed the research literature in the Artículos family group using the existing code list. Most of the primary documents were coded manually as we needed to read through the data ourselves in order to correctly apply the codes. The auto coding tool was used as a supplement, for instance to find specific definitions. In the process of coding the articles, some additional codes were created. In the next round of coding, we coded the diaries and focused on students' thoughts, feelings and opinions to identify verbal, physical and gestural expressions related to bullies, victims and bystanders and write down notes that we later used to contrast all the data from the second to the fifth round. During this round of coding, three new codes were created: "bullies identified by others" (Agresores identificados por los demás), "boys or girls who consider themselves victims" (Niños que se consideran victimas) and "boys or girls who support bullying" (Niños que apoyan el bullying).

The survey data were coded in the third round, and as a result four memos were also created to write about the relations between the codes víctimas, agresor, testigos and observadores. In the fourth round, analyzing the interview data, we focused on the characteristics of the various groups (victim, aggressor,

observer and bystander): *características de las víctimas, características del agresor, características del observador, and características del seguidor*. The focus groups were coded in the fifth and last round. At this stage we wrote memos on the codes "bullies identified by others", "boys or girls who consider themselves victims," and "boys or girls who support bullying" that were created in round two, when we coded the interview data. In every round there was the need to create relations and hyperlinks connecting codes, quotes and memos to each other and going back to primary documents that were coded and analyzed in the previous rounds. Thus, even though we took a sequential approach by coding the documents of one document group after the other, in fact, in the end the analysis proceeded in a spiral going back and forth between documents, developing and refining the code list step by step and gaining insights along the way by writing comments and memos. Our final code list consisted of 45 codes grouped into seven code families. The code families corresponded to the main concepts developed in the conceptual map that was developed at the beginning of the study (Figure 3).

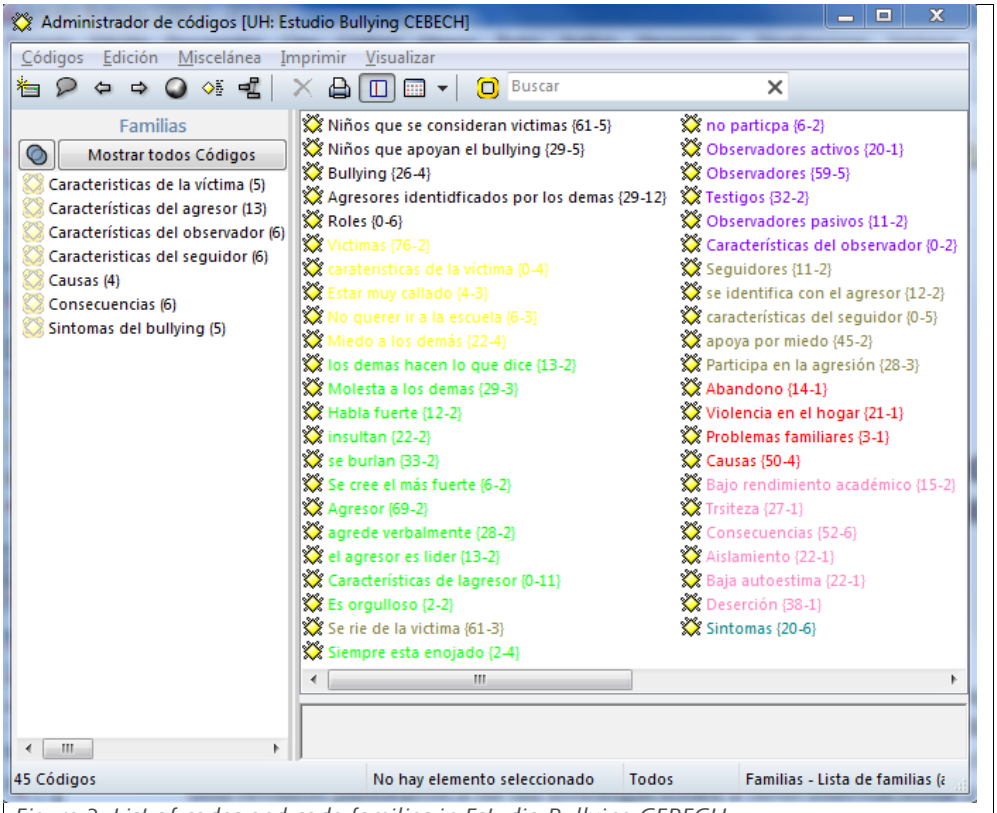

Figure 3: List of codes and code families in Estudio Bullying CEBECH

The Outcome Stage

In order to identify bullying cases and the role of each child involved, as well as the causes and effects of their behavior we sorted the codes by "Groundedness" and "Density" in the Code Manager as shown in Figure 6.

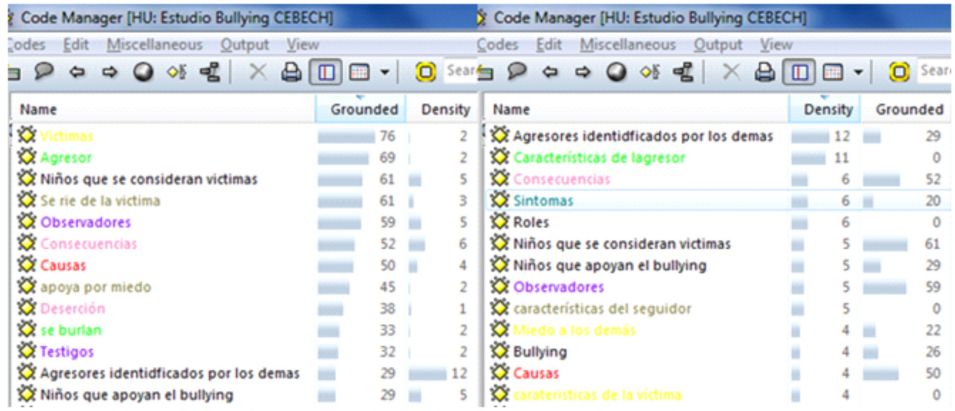

Figure 4: Grounded and Density values of codes

Table 1 shows that 61 of the 117 boys and girls consider themselves to be victims, 29 children were identified by others as being bullies and another 29 as supporters. The density shows the number of linkages between codes that we have created during the process coding. These links can be visualized in a network view.

Original label	English translation	Groundedness	Density
Niños que se consideran victimas	Boys or girls who consider themselves victims	61	5
Agresores identificados por los demás	Bullies identified by others	29	12
Niños que apoyan el bullying	Boys or girls who support bullying	29	5

Table 3: Groundedness and density for selected codes

The network view for the code "boys or girls who consider themselves victims" is shown in Figure 5.

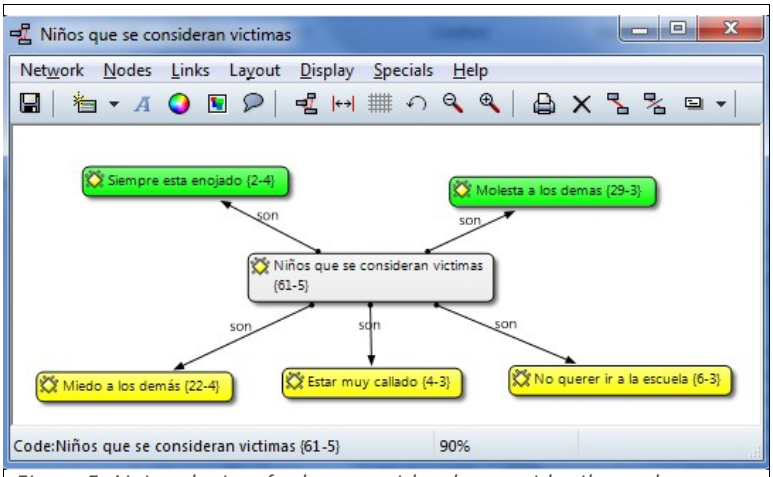

Figure 5: Network view for boys or girls who consider themselves victims

The code "victims" (víctimas) is on the one side (yellow) related to "fear of others" (miedo a los demás), "been quiet" (estar muy calladosa) and "don't want to go to school" (no querer ir a la escuela), and on the other hand through "always is angry" (siempre está enojado) and "disturbs others" (molesta a los demás) to the characteristics of those bullying (green).

The network view for the code "bullies identified by others" is shown in Figure 2. The network view shows that bullies have the following characteristics:

1. "they mock" (se burlan)
2. they are "leaders" (el agresor es lider),
3. they use "verbal assaults" (agrede verbalmente),
4. they dominate: "others do what she/he says" (los demás hacen lo que dice),

5. they "insult" (insulta),
6. they "are pride" (es orgolloso),
7. they "talk loud" (habla fuerte),
8. they "disturbs others" (molesta a los demás),
9. they "believe they are the strongest" (se cree el más fuerte)
10. they are "always angry" (siempre está enojado).

The code is also related to "those supporting bullying" (see Figure 7), through the relation with the brown colored codes "participate in aggression" (participa en la agresión) and "laughs at the victim" (se ríe de la víctima).

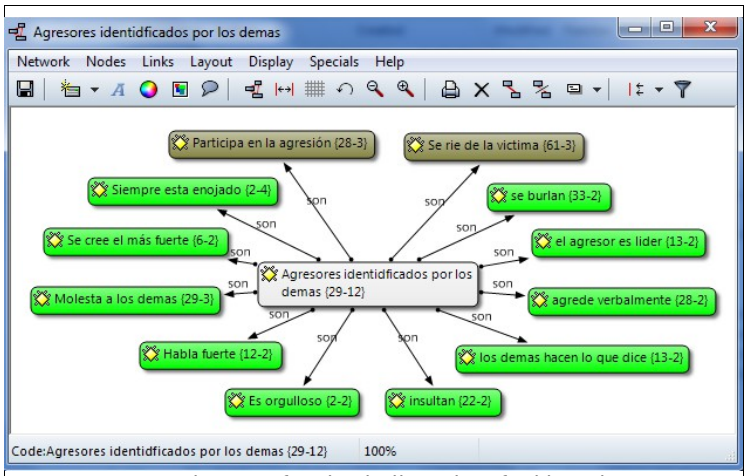

Figure 6: Network view of code "bullies identified by others"

The network view for the code "boys or girls who support bullying" show the following relations (Figure 1):

- "participate in aggression" (participa en la agresión)
- "laughs at the victim" (se ríe de la víctima)
- "identifies with the bully" (se identifica con el agresor) and
- "supports by fear" (apoya por miedo)

The code "fear of others" in yellow (miedo a los demás), links the supporters to the code "victims".

Results

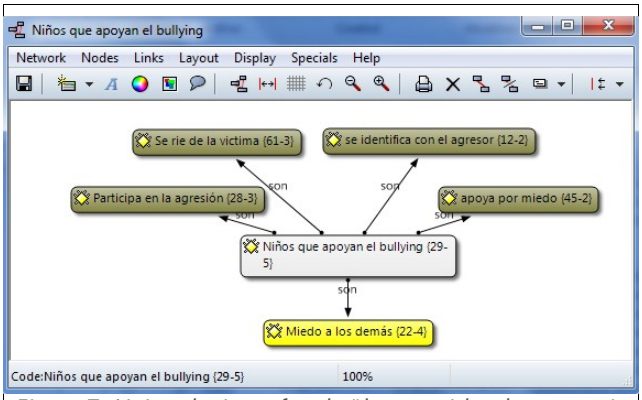

Figure 7: Network view of code "boy or girls who support bullying"

In our study with 117 elementary school children, 75 of them report that their peers insult and give nicknames to other students. In addition, in follow-up interviews, it was confirmed that this phenomenon is mostly associated with verbal abuse between boys and there are fewer incidences between girls. One third of the children reported that physical aggression such as hitting, kicking or pushing is between boys and not between girls. This result matches the findings of similar studies. The observational data and the interviews showed girls are the ones who threaten others, blackmail, and exert psychological coercion. Some girls

use birthday parties to exclude other children who do not meet certain economic and physical characteristics that they value highly like clothing, bags, school supplies, etc. Based on the interview data we learned that three girls led a campaign against another girl and encouraged others to speak negatively about her. This resulted in the creation of a group in a social network where many students joined to mock and annoy this girl, which caused psychological damage to her.

Another important aspect found is the physical space in which the bullies attack and show aggression. The most common attacks were in the classroom when the teacher was not around, but also at the playground when no teacher was present. It is important to note that there were thirteen children who were suffering from constant aggression, which were reported to the school authorities. Meetings were held with the parents to strengthen the students' self-esteem, to help them identify the reasons, and to make them aware of the consequences of these attacks and constant intimidation.

With support from the observation diaries and the activity called "anonymous letter", the children who were assaulted or intimidated by a larger number of peers were confirmed. In this activity, most of the children, after watching a video about the implications of violence between classmates and having analyzed consequences, had to write an unsigned letter to one of their peers that had bullied someone at some point, and thirteen of them gave the same description from a student who attacks others in social networks.

Another finding was that the children thought that among all people present at school, it was the teachers who mostly stopped aggression among students. When asking the children about the reasons why their friends might have intimidated someone, most of them said that they did not know why.

Regarding the justification that children give why other children attack or intimidate other children, they said it was in response to provocations, and in response to what others will do to the aggressor. Also, they believe that some students are weaker and therefore, become a target. It is quite natural that the vast majority of the children state that it is necessary for the teacher to be around in order to solve the problem of violence and aggression, because they are adults with sufficient power and authority to stop the aggression. Further, teachers are closest to the conflict in the classroom, at the playground and in the hallways. They are the ones who stay with children five days a week and, at times, they know more about the children than their parents. Mostly, they are more familiar with the attitude certain boys and girls have towards other students and the problems they have with their classmates.

Theft of learning supplies, money, or objects is a common practice among peers, and it is difficult to do something about it. As expressed by students in the interviews, it is annoying because of the lack of evidence of who commits such acts, and the feeling that no one does anything to remedy the problem.

The fact that children in school feel that they have no friends makes them a target for verbal and physical attacks, and they feel that teachers do not intervene to stop these problems. Their classmates won't

stop or report the attacks either. Bullying, coupled with low self-esteem in children, is the cause of reluctance to go to school because it creates discomfort, frustration and a strong feeling of injustice.

The lack of public policies and intervention guidelines to prevent bullying and cyberbullying, has prompted education authorities and teachers who are closest to the children to take action. However, they do not seem ready to identify, prevent and intervene in solving the situations that are occurring among students. This boosts the spread of the problem and becomes increasingly difficult to handle. As a consequence, the absence of proper guidelines for parents, teachers and educational authorities leads to severe psychological problems for those children affected.

Concluding Remarks

Even though we were novice users, having used ATLAS.ti to perform the analysis described above, has left us with an enriching experience. It was stressful at times when we did not know how to use a specific tool to improve the analysis. But overall, this motivated us to continue learning even more, every time. The following issues we consider the most significant lessons learned during the process:

Data Transcription

As we did not know about the transcription feature, we transcribed the data elsewhere. This meant that the transcript was not linked to the original source. Every time we needed to watch or listen to the original source, e. g., whenever a doubt arose about a note concerning a gesture or a physical expression of a student, it was very time consuming to find the instance in the recording. Transcribing data directly in ATLAS.ti and linking transcript and source file via the A-Docs feature would have avoided these problems. Also, using this feature we could have read, listened to the original audio recording or watched video in sync with the transcribed text during the analysis process

Auto Coding

This tool was helpful in saving time for coding specific data when there we felt there was need to read the primary documents first. But it had to be used carefully: When we uncheck the "always confirm" box and the search expression was not accurate, the results were a lot of useless coded data. Further, if the selected code already contained quotations, the useless data threatened to contaminate the entire coding. What we learned from this was: Whenever we had any doubt about the accuracy of a search expression, we created a temporary code for the automatic coding process. After the process was done, we reviewed the resulting quotations, and if the quotations were as expected, we merged the code into an already existing code.

When we were using the auto coding tool to search in PDF documents, we noticed that some auto-coded segments were not complete. This happened when the text to be coded was going beyond the end of

one page to be continued on the next page. Whenever this happened, we coded the missing part manually and wrote a comment as a reminder that these two quotations belong together.

Linking Elements

When we were linking elements, especially quotations, by using the menus, we often had trouble to locate the source and the target quotation, which resulted in mistakes. We found it easier to use the network view for linking objects. The way we did this was by locating the source quotation in the Quotation Manager. Next we opened the network view of the selected quotation, located the target quotation in the Quotations Manager and dragged it in the network view. From here, the linking was quick and easy.

Network Views

The need to show a previous version from a network view taught us that it is important to always save old versions of the network views. Another option to review previous steps of one's work is to save the project under a new name and to create a copy bundle file of this version. This way, one can always go back to an earlier stage of the analysis.

References

Avilés, J. M. (2006). *Bullying. El maltrato entre iguales. Agresores, víctimas y testigos en la escuela*. Salamanca: Amarú

Avilés, J. M. (2012). *Manual contra el bullying. Guía para el profesorado.* Lima: Libro Amigo

Buelga, S; Cava, M J; Musitu, G; (2010). Cyberbullying: victimización entre adolescentes a través del teléfono móvil y de Internet. Psicothema, 22(4) 784-789. Recuperado de http://www.redalyc.org/articulo.oa?id=72715515039

ENSANUT (2006). *Encuesta Nacional de Salud y Nutrición*. México: Secretaría de Salud

Félix-Mateo, V., Soriano-Ferrer, M., Godoy Mesas, C. y Sancho Vicente, S. (2010). El Ciberacoso en la enseñanza obligatoria. *Aula Abierta*. 38(1). Recuperado el 28 de mayo de 2013, de http://dialnet.unirioja.es/descarga/articulo/3214238.pdf

Fernández Martín, M., Sánchez Burón, A., & Beltrán Llera, J. A. (2004). Análisis cualitativo de la percepción del profesorado y de las familias sobre los conflictos y las conductas agresivas entre escolares. (Spanish). *Revista Española De Pedagogía*, (229), 483-503.

Martín, P. (2009). La visión del fenómeno bullying en alumnos del Curso de Aptitud Pedagógica en los años 2005/06 y 2006/07: semejanzas y diferencias. (Spanish). *Estudios Sobre Educación*, (17), 125-144.

Miles, Matthew and Huberman, Michel (1994). *Qualitative data analysis: a sourcebook,* Beverly Hills: Sage.

Olweus, D. (2006). *Conductas de acoso y amenaza entre escolares*. Madrid: Morata.

Ortega, R. (2010). *Agresividad injustificada, bullying y violencia escolar.* Madrid: Alianza Ediciones.

Prieto Quezada, M., Carrillo Navarro, J., & Jiménez Mora, J. (2005). *La violencia escolar.* (Spanish). Revista Mexicana De Investigación Educativa, 10(27), 1027-1045.

About The Authors

Enrique Gutierrez Espinosa

Dr. Enrique Gutiérrez Espinosa is an Associate Professor at the University Autonomous of Chiapas in México. He graduated from the Monterrey Technological Institute of México with a Master in IT Management and earned his Doctorate in Computer Systems from the South University in Chiapas, México. He leads the State, Society and Education (SSE) research group and have a lead role in educational research which includes the use of technology as a teaching device to improve learning, and also collaborates in investigating school violence and digital literacy. He is an ATLAS.ti student trainer in the Regional Studies Doctorate Program and Cultural Studies Master Program, both in the University Autonomous of Chiapas. - Email: egutierrezespinosa@gmail.com, enrique.gutierrez@unach.mx. Contact phone: +52 (961) 1207649

Hedaly Aguilar Gamboa

Dr. Hedaly Aguilar Gamboa is an Associate Professor at the University Autonomous of Chiapas in México. She collaborates in the State, Society and Education (SSE) research group investigating education in values and school violence. She also is a faculty member in the Humanities Faculty at the University Autonomous of Chiapas. - Email: hedalyb@hotmail.com

Veronica C. Castellanos Leon

Dr. Verónica C. Castellanos León is a Professor at the University Autonomous of Chiapas in México. She is member of the National Research System of México., and collaborates in the State, Society and Education (SSE) research group investigating gender studies, human rights and school violence. She is also a faculty member in the Humanities Faculty at the University Autonomous of Chiapas. - Email: vleon73@msn.com

Ileana del C. Carrillo Gonzalez

Mtra. Ileana del C. Carrillo González is a Professor at the University Autonomous of Chiapas in México. She collaborates in the State, Society and Education (SSE) research group investigating digital literacity, and school violence. She is also a faculty member in the Humanities Faculty at the University Autonomous of Chiapas. - Email: icarrillog@hotmail.com

Article Information

This article is published at the institutional Repository of Technische Universität Berlin, DOI 10.14279/depositonce-5160, http://dx.doi.org/10.14279/depositonce-5160. It is part of ATLAS.ti User Conference 2015 – Qualitative data analysis and beyond, edited by Susanne Friese and Thomas Ringmayr. Berlin: Universitätsverlag der TU Berlin, 2016, ISBN 978-3-7983-2822-8 (composite publication), DOI: 10.14279/depositonce-5079, http://dx.doi.org/10.14279/depositonce-5079