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# Parent Communication and Earthquake Safety

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# Parent Communication and Earthquake Safety

An Action Research Report by Damir Dzafic

Parent Communication and Earthquake Safety

Submitted on April 17, 2016

in fulfillment of final requirements for the MAED degree

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Date \_\_\_\_\_

### Abstract

The action research study investigated increasing communication on earthquake safety in order to alleviate parental concern. The investigation took place at a local private Montessori school. The participants were parents from the school. The data was collected through pre and post surveys, observations, and journaling. The results showed that increasing communication between the school and the parent community on this subject matter did alleviate parental concern. The parents felt more reassured knowing the details on earthquake safety plan. However, the challenge is keeping the new parents that come to the school informed about the school's earthquake safety plan. Overall, keeping effective communication on this subject with the parent community is the key.

As a parent living in a part of the United States of America vulnerable to earthquakes, I have wondered if children are prepared for an earthquake disaster at school, if my child's school is earthquake safe, and how prepared the staff is for this kind of a disaster. How do I know if my child knows what the earthquake procedure is and if he is performing it correctly? How do the rest of the parents feel about earthquake preparedness at schools? If necessary, what actions can be taken to make the school safer?

Earthquake preparedness is an important topic in this school's community and parents and the staff are collaborating to ensure the safety of everyone. Not only are they addressing the school's earthquake preparedness needs, they are also communicating with parents to equip their homes with earthquake kits.

The parent community expressed concerns on earthquake safety at our school. The main concern was the lack of communication on earthquake procedure between the school and parents. Furthermore, there were concerns about the safety of the building, students' preparedness for an earthquake, staff preparedness for an earthquake response, the earthquake safety plan, and what to do after the disaster.

The parent community came across an article in New York Times that talked about the next big earthquake in the Pacific Northwest and the potential disaster. Due to this region being long overdue for a big earthquake, the concern spread across the school and was shared with the administration. The result was that the safety committee, formed by parents and staff, looked at the issues in order to address the worries.

The parents receive a Parent Handbook upon enrolling their child that covers all the necessary information they need to know. A section in that handbook talks about the

school's earthquake procedure. However, the feeling was still that more information was needed. That section does not mention the current safety of the school's building, if the students are prepared enough and what they do to get prepared, how well prepared the staff is, and what to do after the disaster. The feeling from parents was that these issues needed to be addressed and communicated to the parent community in order to alleviate their concerns on earthquake safety.

During my interventions I attended parent interactions gatherings, safety committee meetings, kept a self-reflection journal, and kept a tally sheet when talking to parents. I initiated earthquake safety conversation at parent interaction gatherings and graded their responses to earthquake safety with positive, negative, and neutral on data tool. I did the same with the safety committee at our school. The safety committee was formed by parents and staff. I graded their responses on earthquake safety with positive, negative, and neutral. I kept a self-reflection journal for any parent interactions on earthquake safety and I wrote my observations from these meetings.

The research took place in a private Montessori school. Two interventions took place at social gatherings where the parent participants were interviewed. The social gatherings were designed for parents to interact with the administrator and ask any questions. This was the opportunity for me to see many participants and do my intervention. The participants were adults between 30-50 years of age. Most of the participants were females.

The other element in my intervention took place with a group of parents and staff members. This group knows the setting very well. Here the intervention was about how the parent community feels about the earthquake safety, what their major concerns are,

and what can be done to achieve these goals. The setting included food and refreshments as well. The atmosphere was calm and positive. The participants were approximately 35-65 years of age. There were eight participants.

The third intervention took place in the educational setting's hallways. These interventions were not planned. The time and day were not scheduled, rather it happened freely. The participants were anywhere between 30-50 years of age. Most of the participants were females. The effectiveness of increasing parent communication to decrease parental concern about earthquake safety in schools is the focus of this research. Thus, I sought to determine. Will increasing communication on earthquake safety alleviate parental concern at our school?

### **Literature Review**

Schools are trying to address students' different needs, but earthquake safety is a major concern among parents, students, and educators. The schools are expected to have an earthquake safety plan in order to maintain a safe and welcoming environment. However, in order to encourage this plan it requires a whole community: staff, students, and parents. By allowing parents to share their opinion to build a strong earthquake safety plan, a stronger community is created as well. In addition to the safety plan, an annual school safety assessment is needed. This allows schools to test their earthquake safety plan and tackle any problems needed. Another important tool is school communication network. This allows clear communication between the front office, classrooms, and the school's outside environment. (Ronald, 1994)

## **Earthquakes**

Earthquakes might only last a couple of minutes, but the impact can be catastrophic. History has shown us what significant impact these silent killers can produce. (Maricle, 2011) The Pacific Northwest is known for its earthquake danger. Therefore, schools are required to have a safety plan and to practice earthquake drills regularly. (Burns & Wang, 2015)

**Historical examples.** In 1988 an earthquake in Armenia caused 25,000 deaths. However, in 1989 the Loma Prieta earthquake that hit San Francisco caused only 62 deaths. Whatever earthquake an area gets hit by, earthquake preparations such as taking cover and evacuation to a safe area can help minimize the number of casualties. Performing regular earthquake drills can help decrease number of casualties as well.

The Marmara earthquake in 1999 is a great example of the need to change building codes to make buildings safer. The main cause of such a high number of deaths was put on the structural failures because the houses and buildings were not built up to the earthquake codes. The death toll of this earthquake was 17,127, and 43,953 people were hospitalized. The cost of the damage was \$6.2 billion. After the devastating disaster several steps were suggested to be taken; legislation and training, increased public awareness, insurance, urban planning and management, and disaster response strategies. (Barakat & Ozerden, 2000)

**Northwest earthquake history.** The Pacific Northwest has a history of strong earthquakes and it is the most active seismic region in the world. About 15-20 earthquakes happen each year in this region. Intensity of the casualties and damage can be reduced if precautions are taken seriously. Scientists have said that Cascadia



Subduction Zone will produce a large magnitude earthquake that will last over five minutes. (Clark, 2015)

**Earthquake safety.** Pratt suggests five elements to have in place in order to minimize damage from earthquake disaster: someone with authority to head the disaster response team, insurance records, backup computer resources, an alternate location and communication lines, and testing of your plan. (1994)

Government, non-profits, and the private sectors support research on earthquakes and increasing the resilience of communities at risk. The research showed that “earthquake risk reduction...requires a problem-focused rather than discipline-specific approach to cut across political, social, and technological boundaries to find lasting solutions” (Earthquake Engineering Research Institute, n.d.). Furthermore, in order to change the earthquake problem the building codes must be changed in order to make buildings safer. (Maricle, 2008)

In 2001 the government took actions and several earthquake related bills became laws. These laws require schools with more than 250 students to have life safety standards and the buildings have to be screened for safety. If the schools did not pass the screening, they were classified as high-risk. (Burns & Wang). The Oregon schools used a “Rapid Visual Screening” process to evaluate buildings safety. They looked at seismic zone, building structural type, building irregularities, original construction date, and soil type. Then, they suggested ten things schools and communities can do to improve the seismic safety of their schools:

- Get familiar with the seismic needs assessment report
- Consider working with structural engineers on improvements

- Prioritize improvements in relation to earthquake safety
- Look at seismic rehabilitation as a long term project.
- Learn from other schools
- Update your emergency plan
- Practice drills and emergency procedures

Oregon law requires all school to practice earthquake procedures at least 30 minutes each month. The guidelines for earthquake drills are: notify 911 about the drill, sound alarm, duck cover and hold initiated, check self, evaluate location for safety, recount students, and evaluate drill. (Walker, n.d.)

Community-based drills have a positive effect on the individual participants. The drills bring the reality of what might happen in an earthquake situation. The drills reenact possible frightening events in a less stressful situation, it encourages dialogue, and it refreshes everyone's earthquake skills. (Simpson, 2002)

### **Parent Communication**

There are serious safety concerns and changes being made in schools. These changes and concerns need to be effectively communicated to parents because parents are an important part of a school community. Parents' suggestions towards safety at schools need to be considered.

**Importance of parent communication.** Efficient communication between parents and schools leads towards a successful partnership. The study showed that children whose parents are involved and are communicating regularly with their child's teacher showed greater success at school. Furthermore, these students also had fewer behavior problems. (Trame & Palts, 2015)

Another important piece of communication with parents is effective earthquake preparedness. Parents, teachers, and school staff can work as a community to pass bonds that include improvements to seismic safety. Also, the community can ask their local fire station for general help regarding earthquake safety if needed. (Burns & Wang, n.d.)

**Modes of school-parent communication.** Parents felt that, in general, e-mail and phone was the best mode of communication. (Olmstead, 2015) Parent involvement in schools to help their children with success is more important than ever. Overall, parents and teachers see technology such as e-mail, the school website, and phone calling as an effective tool for positive communication. For example, the school's website can be used to provide feedback to parents. When used to its fullest potential, this tool can be an effective communication tool between schools and parents (Olmstead, 2013)

Furthermore, communication can occur through home visits, conferences, open houses, and school-wide activities. These strategies allow teachers to apply different communication based on parents' needs in order to support child's development. (Trame & Palts 2015)

In conclusion, successful parent communication leads to safer school environment. For instance, having parents involved in creating a school's safety plan educates them on what the staff will do to keep the children safe. Parents will feel safer and more at ease if they have a contribution in creating a safety plan. Also, having an active parent association keeps the parents informed on school's happenings. Maintaining a healthy parent communication concerning school's safety decreases some of the parental concern.

### **Methodology**

My intervention was to increase parent communication on earthquake and gauge the effect on the parental concerns. In order to achieve this goal I attended parent social gatherings and provided an earthquake safety survey, attended meetings with the safety committee, hallway conversation meetings, and kept a self-reflection journal. A post survey was performed to analyze the result of my intervention (See Appendix A).

I began my intervention by attending the parent social gathering events hosted by the Parent Association and the school's administrator. The event was hosted in the morning. The atmosphere was calm and relaxing and the participants seemed happy. The event was set up for the attendees to ask the administrator questions on earthquake safety. I also used this time to ask the parent participants to take part in my earthquake safety survey.

My goal was to only spend a couple of minutes with each participant in order to complete as many surveys as possible. The survey questions were: how earthquake safe do you feel our building is, how do you feel about our earthquake safety plan, how well prepared do you feel our children are for an earthquake disaster, and other comments. The reason why I wanted to spend time with the parent participants to complete the survey was to make it more personal. However, because of the interest in my research, the conversation and survey on earthquake safety lasted seven to ten minutes. Furthermore, this enabled me to take good notes and get details on this topic from each participant.

Next, was the meeting with the Safety Committee. The purpose of this meeting was to see what this committee is doing to improve our earthquake safety. I sat down and

listened to their conversation on the current state of school safety. Their primary task now is to update the current earthquake safety plan and procedure. This includes the safety protocol in the event of an earthquake, earthquake safety bag in each classroom, food and water supply, safety location meetings, building inspection, etc. Following their discussion, I had the opportunity to ask them my questions. The questions were: what are parents', and ours, priority concerns regarding our earthquake safety plan, what is our timeline on making these improvements, what challenges are we facing in meeting these goals, other comments (See Appendix B).

Next, I attended another parent social event. I asked the participants the same four questions. As previously mentioned, each survey took around seven to ten minutes. This time the attendance was not as big as in the first meeting. Most of the participants were female (See Appendix A).

As planned, I attended another Safety Committee meeting. This time the main purpose was to observe the meeting and listen to their conversation. This time the participants organized a pot luck because the meeting was in the evening. Since not everyone from the safety committee was present at the first meeting, and I wanted to ask them the same questions and get their response. This meeting was about earthquake preparedness at home. The safety committee wants to make sure that parents are prepared and ready at home as well. The plan was to come up with a list of necessities for an earthquake disaster. After their meeting I was able to ask the other members the same four question (See Appendix B).

Throughout my intervention I had hallway conversations with parents regarding school earthquake safety whenever possible. This occurred before or after school. I asked

the parent participants the same four questions that I used for parent social gatherings. The reason for this intervention was because some participants were not able to attend the parent socials and I wanted to give them a chance to participate. The hallway conversations did not last as long as at the parent social gatherings (See Appendix C).

Throughout this intervention period I kept a reflection journal. The purpose of this was to write about the reactions and feelings observed at parent social gatherings, safety committee meetings, and hallways conversations. I also journaled about the length of surveys, people's excitement during surveys, some of their responses to my questions, and about the event in general, such as food, drinks, etc.

At the end of my intervention period, I gave parent participants a post survey. The question was to what degree has recent communication impacted your view of school earthquake safety at school? Then they circled positive, neutral, negative. Then they had the opportunity to explain their answer (See Appendix D).

### **Analysis of Data**

Some of the data was collected through surveys and other data through journaling and observation. The surveys investigated how parents feel about the earthquake safety of the school, communication between the parent community and the school, how much they are aware of the school's earthquake safety plan, earthquake safety goals and challenges in reaching these goals. The questions were geared toward alleviating parents' concerns, improving the school's earthquake safety plan, and improving communication.

The first survey that was administered had four questions. Three of the questions had positive, negative, neutral response with the option to explain their answer more in detail. The fourth question gave the participants the option to add anything else.

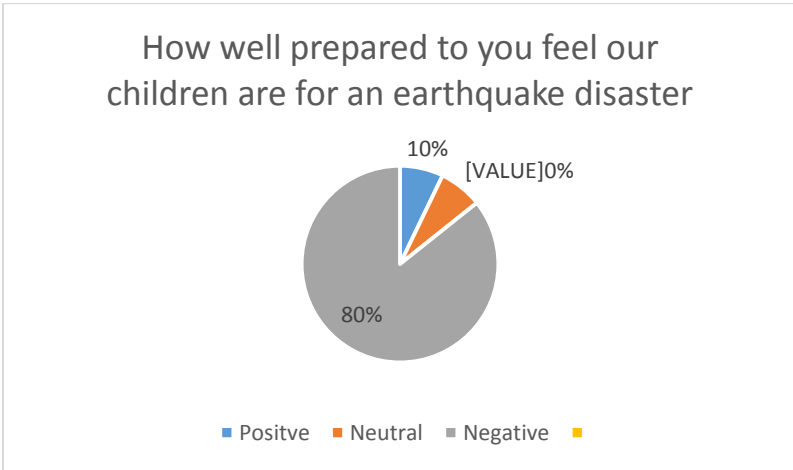
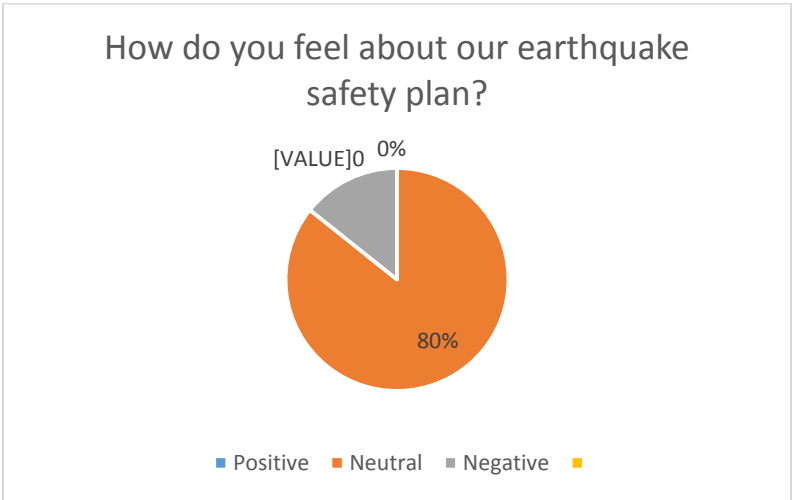
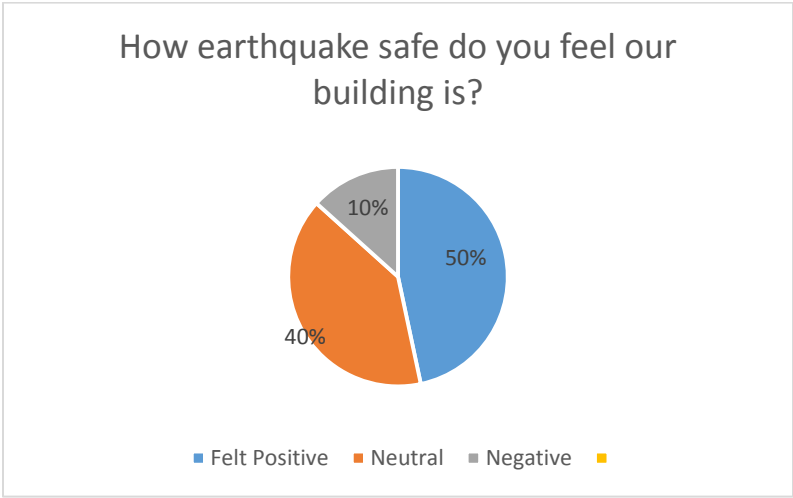
The second survey that was administered had four questions as well. Three of the questions were open ended questions and the fourth question gave them opportunity to add any other information they desired.

The third survey that was administered had four questions. Three of the questions had positive, negative, neutral responses with the option to explain their answer more in detail if desired. The fourth questions gave them the option to add any more information.

The parent community expressed concerns about earthquake safety. Their concerns were the building being old, children's readiness to respond to an earthquake disaster, staff readiness, and food, water and shelter supplies after the disaster. The safety committee responded to the parents' concerns by addressing these issues through revising the earthquake safety plan and getting the building provisionally inspected.

A one question survey with positive, negative, neutral responses with the ability to further explain the answer was administered at the end of the intervention. A self-reflection journal was kept where I wrote my observations during my intervention at the various meetings.

**Results from Parent Social Gatherings and Hallway Conversations**







Both the parent social gatherings and hallway conversations surveys showed that parents were concerned about the safety of the building, earthquake preparedness of the children, they felt negative about earthquake safety plan, worried about having not enough food and water supply, things stored too high throughout the school, library not safe enough, and communication between the parents and the school.

Parents felt that the old earthquake safety plan needed to be updated. They did not know what the earthquake procedures were, where food and water were kept, and that more communication was needed for procedures.

Parents felt that the children were not well enough prepared and they did not know what to do after the potential disaster. The parents also did not know what the children practiced for an earthquake disaster.

Most of the parents felt good about the building being single level. However, a few participants were concerned about many windows in the classrooms and the hallways.

**Results from Safety Committee Meetings/Surveys**

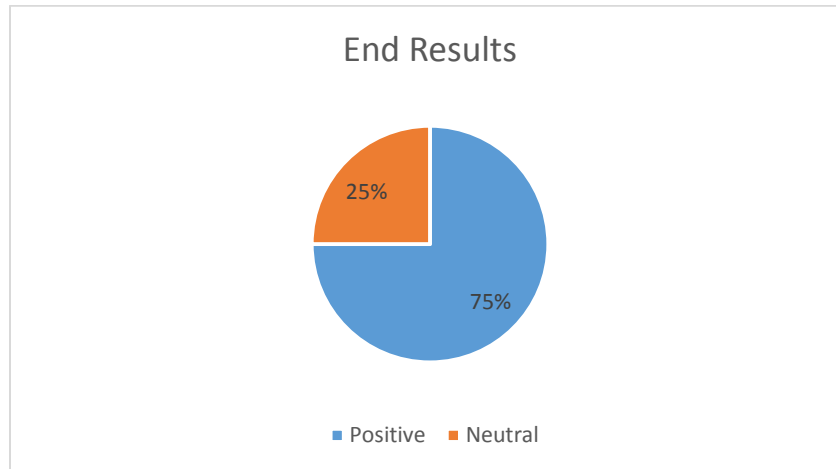
The safety committee felt that children are our priority concerns regarding the earthquake safety plan, better communication among all people, having food and water supplies for at least two weeks, and having a well-established plan that can be easily maintained. The timeline for making these changes and improvements varies. Some changes will start as soon as after the spring break. They feel that everything will be in place by the end of 2016. The biggest challenge will be the cost. The biggest challenges that we are facing is the cost, agreement among parents and staff, that people do not panic, and preparation.

**Self-Reflection Journal**

Throughout this intervention I kept a self-reflection journal. Parents were very positive and enthusiastic about my intervention. They thanked me for doing this very important work, they thanked me for informing them about the current earthquake safety plan because they did not know about it, they were smiling while talking to me, their body expression was happy, and they could not wait for the results. They also felt that there is a big need for this research. They felt that communication needs to be improved between the school and the parents. Parents did not know much about the current earthquake safety plan and they felt this is a big problem. However, there is a lot of positive energy in the building regarding this topic and parents and the staff are enthusiastic about improving the safety. Everyone is working together towards the same goal; the safety of everyone. Furthermore, not only is everyone concerned about the safety of all at the school, but the safety committee also wants to improve the safety of

families at their own home. They want to make sure all families have earthquake kits in their home and enough of food and water supplies.

### End Survey



Finally, I surveyed the parents at the end to see the results of my intervention. 75% of the parent community felt more positive (See Appendix D). They felt that informing them about this topic gave them the opportunity to find out what the school does. It also addressed some very important topics such as the safety of the building, food and water supplies, earthquake procedure, and most importantly communication on this topic. They felt that I communicated to them what the old earthquake safety plan was and now, together with the Safety Committee, what the new one is. They feel positive about having a strong earthquake safety plan in place and that they know what it is. Improving communication overall was an important step. However, some still feel, even though the building inspection came positive, that the building and the many windows are a big concern. On the other side, improving earthquake safety at their homes is a positive step to the parents.

**Conclusion**

In conclusion, according to the data improving communication between the school and the parents was the key to alleviate some of their concern. Many parents did not know much about the school's current earthquake safety plan, what the children do to prepare for an earthquake disaster, and if the staff is ready. By increasing communication through updating parents about the new earthquake safety plan and addressing their concerns helped this community. Parents and the staff showed great interest in addressing this issue. Everyone worked together and showed much enthusiasm in improving the safety of all at the school. Furthermore, by addressing the safety of the parent community at their own home is another positive step of the entire community working together.

**Action Plan**

The impact of my intervention alleviated parental concern on earthquake safety at the school and it improved communication between the school and the parents on this subject. With the help of the safety committee the new earthquake safety plan is in effect and the communication on this subject between the parents and the school has increased. Parents are aware of the new procedures and they feel safer. The school staff feels safer by knowing where the food and water supply is located, where the earthquake safety meeting place outside is, that the building is earthquake safe, the children are practicing regularly in the earthquake safety drills, and the communication with the parents has improved. Being earthquake safe and ready took a major load off everyone's back and now the parents and the school can rest on this subject.

With the new earthquake safety plan in place and all of this being communicated to the parent community, the staff can fully focus on the academics and the children.

Together with the parents, the main focus can be addressed to the students' academic needs. The new information will be shared with the students and they will be better prepared for a potential earthquake disaster. By being aware of where the safety meeting place is, food and water supply, whom to contact in the case of an emergency makes the children ready and prepared for the worst case scenario.

This also educates the students that we live in an earthquake sensitive area and that cannot be ignored. Also, we hope the children will take the earthquake safety knowledge home and help their parents earthquake proof their home.

The results of the research changed my thinking on this topic. It definitely opened up my eyes to the importance of open and consistent communication in order to be better prepared for an earthquake disaster at the school and at home. Not everyone knew where the food and water supply was located and that was a major concern. These two things are the major necessities in an earthquake scenario. Imagine being trapped at the school for five days and not knowing where food and water is. The earthquake safety plan will be studied thoroughly in order to know all the details and be prepared.

Also, I will take this knowledge and prepare my own family for an earthquake disaster. We need to realize that we need to be prepared at home as well. An earthquake can happen at any time of the day and we cannot ignore that fact. I will definitely stock on food and water, have an emergency kit, and an emergency plan. It is important not to panic and overreact in this situation, but we still need to be safe. Panic can lead people to disaster.

It would be interesting to see in a few years how the new parents that come to school will feel about earthquake safety at the school. Also, it will be interesting to see how the

school will communicate earthquake safety to new parents in the future. The current parent community is aware of the earthquake safety plan. Keeping communication on this subject up to date will be important in order to alleviate parental concern. Doing future action research on communication between the school and parent community on earthquake safety at the school is a potential topic.

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**Appendix**

Appendix A

**Date:**

**Parent Socials Tally Sheet**

1. How earthquake safe do you feel our building is? Positive Negative Neutral

2. How do you feel about our earthquake safety plan? Positive Negative Neutral

3. How well prepared do you feel our children are for an earthquake disaster?

Positive Negative Neutral

4. Other?

Appendix B

**Date:**

**Safety Committee Tally Sheet**

1. What are parents', and ours, priority concerns regarding our earthquake safety plan?
2. What is our timeline on making these improvements?
3. What challenges are we facing in meeting our goals?
4. Other?

Appendix C

**Date:**

**Hallway Conversations Tally Sheet**

1. How earthquake safe do you feel our building is?    Positive    Negative    Neutral

2. How do you feel about our earthquake safety plan?    Positive    Negative    Neutral

3. How well prepared do you feel our children are for an earthquake disaster?

Positive    Negative    Neutral

4. Other?

Appendix D

**Post-Earthquake Evaluation**

To what degree has recent communication impacted your view of school earthquake safety at school? Please explain.

Negative -----positive

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Neutral