

## A Formative Evaluation of Sound-Field Amplification System Across Several Grade Levels in Four Schools

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**A formative evaluation was conducted during the 2002 - 2003 school year to determine the degree to which sound-field amplification systems were being implemented in the schools involved in the study and to make improvements/adjustments as necessary. The issues or questions addressed in our evaluation were: 1) How effective was the training provided to the teachers? 2) How often are teachers using the equipment? 3) What effects does using this equipment have on the teachers? 4) What effects does using this equipment have on the students? Two on-site visits were made by an evaluation team to each of the four schools involved in the study during the course of the 2002-03 school year. In addition, a teacher survey was administered at the end of the school year. Results indicated that 95% of the teachers used the sound-field system to some degree. Teachers reported less voice strain, greater clarity of their voices, and improved student attention and participation with use of the sound-field systems. Teachers also identified several areas of needed improvement in the equipment itself and in service-related areas. This study will present these results, along with several recommendations regarding additional equipment needs, training, and need for additional consultation.**

Sound-field amplification systems have been in use for more than two decades. The concept of providing amplification of the teacher's voice throughout the regular classroom began in 1978 with the Mainstream Amplification Resource Room Study (MARRS) (Ray, 1988). MARRS was a National Diffusion Network (NDN) project that gathered data for 13 years. MAARS featured the use of a wireless FM microphone system for sound-field amplification of the classroom teacher's voice. Amplification of the teacher's voice above background noise was provided to all students so that everyone seated throughout the classroom space could hear with equal clarity. Through the use of this equipment, it was found that oral instructions were enhanced, teacher voice fatigue was lessened, and students' academic achievement was improved.

Crandell, Smaldino, and Flexer (1995) reported that use of sound-field systems in the classroom led to changes in students' academic achievement, speech recognition scores, attending skills, and learning behaviors. In a recent study by McCarty (2002), the effects of the Ultimate Sound-Field Amplification Systems by Audio Enhancement were reported on fifth-grade Stanford Achievement Test (SAT) score gains and on fourth-grade Criterion Reference Test (CRT) scores. The study indicated that fifth-grade SAT scores were significantly higher in all areas of study with use of the classroom amplification system, including math, reading, language, science, and social science. In addition, fourth-grade CRT Scores dramatically increased in the same content areas when classrooms were equipped with sound-field amplification systems compared to the previous year's test scores without sound-field amplification.

Over the last five years, the educational audiologists at Oakland Schools (ISD) have implemented a strategic plan to introduce high-quality sound enhancement equipment into local district classrooms. In Oakland County, there are 28 local school districts and 16 public school academies that serve over 203,000 public school students, including 208 elementary school buildings, 65 middle schools, and 56 high-school and alternative high-school buildings - all served by Oakland Schools. To date, sound enhancement equipment has been installed in more than 4000 elementary and secondary classrooms. Consistent with the mission to pursue equity and excellence in education through quality service and leadership, Oakland Schools have developed policies and procedures to solidify the commitment to the schools.

Through the day-to-day business of working with schools using sound field amplification systems, Oakland Schools Educational Audiologists identified areas of concern both internally and externally. The common threads were in the areas of training and service. The Educational Audiologist work group decided to look at these issues in an evaluation study.

The schools selected for this study were the ones from the 28 school districts that did not have equipment the previous year and volunteered to be part of the study. School 1 had 16 Ultimate Systems (one amplifier/receiver, one infrared transmitter, four ceiling mounted speakers, one external sensor - not including student hand-held microphone) installed. A total of 15 classroom teachers participated in the survey. School 2 had 21 Ultimate Pal Systems (including student hand-held microphones) installed with 15 classroom teachers participating in the study. School 3

had 14 Ultimate Pal Systems installed with 10 teachers participating. Finally, an Ultimate Pal System was purchased for the science lab/classroom in School 4, which was the only middle school in the study (the other schools were elementary schools). This classroom teacher participated in the survey.

A formative evaluation was conducted during the 2002 - 2003 school year to determine the degree to which the system was being implemented in the schools. Further, data were collected to make improvements/adjustments as necessary. The issues or questions addressed in the evaluation were:

1. How effective was the training provided to the teachers?
2. How often are teachers using the equipment?
3. What effects does using this equipment have on the teachers?
4. What effects does using this equipment have on the students?

### Methods

The evaluation plan consisted of two on-site visits by the Evaluation Team to each of the schools involved in the study during the course of the 2002-03 school year, and a teacher survey, which was administered at the end of the school year (Appendix A). During the on-site visits, the Evaluation Team observed teachers using the system and discussed the use of the equipment. Minor adjustments were made to the system, especially with regard to the volume of the speakers and microphones to eliminate distortion. Additional in-service was provided to teachers as needed and requests for replacement equipment were recorded and sent to the appropriate party. The team also observed students in the classrooms with and without hand-held microphones. In May 2003, teachers at School 1 were administered the teacher survey in a mandatory staff meeting. The teachers at schools 2 and 3 were administered the teacher survey during a joint mandatory staff meeting convened by the principals.

The teacher surveys were compiled and the percent of responses were recorded for each question. The data were disaggregated by school and by whether schools were equipped with student hand-held microphones. The Chi-Square Test of significance was used to determine if statistically significant differences existed for each analysis. A significance level of 0.05 was used.

### Results

In the four schools, there were a total of 52 teachers who have sound-field amplification equipment in their classrooms. Forty-one of those teachers completed the survey, for a response rate of 78.8 %. A total of 36.6% were from School 1, 36.6% from School 2, 24.4% from School 3, and the one teacher in School 4 represented 2.4%. The 41 teachers were from the following grade levels:

- 19.5% Kindergarten
- 12.2% 1st Grade
- 12.2% 2nd Grade
- 14.6% 3rd Grade
- 12.2% 4th Grade
- 9.8% 5th Grade
- 17.1% Multiple Grades
- 2.4% Middle School

A total of 95.5% of the teachers surveyed indicated that they used the sound-field system throughout the school year. Of those who used the system, 61.5% indicated that they had received initial training.

The questions and responses presented in Table 1 indicated that, in general, teachers found the training helpful in applying and operating the system. Those who indicated the initial in-service was “of little help or not helpful” were from School 3 and were in the minority of teachers who did not use the system.

**Table 1. Initial In-Service Questions**

| Very Helpful | Helpful | Undecided | Of Little Help | Not Helpful | The initial in-service training provided by the                         |
|--------------|---------|-----------|----------------|-------------|---|
| 34.6%        | 42.3%   | 7.7%      | 3.8%           | 11.5%       | 1. manufacturer in OPERATING the system was ...                         |
| 20.0%        | 44.0%   | 16.0%     | 8.0%           | 12.0%       | 2. manufacturer in APPLYING the system in my classroom was ...          |
| 50.0%        | 50.0%   |           |                |             | 3. Oakland Schools staff in OPERATING the system was ...                |
| 48.0%        | 52.0%   |           |                |             | 4. Oakland Schools staff in APPLYING the system in my classroom was ... |

Overall, approximately 75% of the responses to the nine questions regarding effects of the sound-field system on students were either “much more” or “slightly more” effective (Table 2). Within the “no change” category, responses ranged from 10.5% to 37.8%. It appears that the system did have a positive effect on student participation, on-task behavior, and overall achievement

In terms of the effects of the system on teachers, decrease in voice strain was the most noticeable effect as (Table 3). The system also helped teachers conserve their energy level. The inconsistent responses to the question regarding the need for repetition of oral directions may be attributable to the way the question was worded. In other words, the question was most likely misinterpreted. During the on-site visits by the Evaluation Team, teachers indicated that the system was helpful in reducing the need for repetition of instructions. For the question regarding self-assessment of their effectiveness, the teachers were generally positive with the exception of those teachers who did not use the system.

**Table 2. Effects of System on Students**

| Much More | Slightly More | No Change | Slightly Less | Much Less | What was the effect on the students?:                                |
|-----------|---------------|-----------|---------------|-----------|--|
| 44.7%     | 44.7%         | 10.5%     |               |           | 5. attention when directions were presented to the whole class?      |
| 28.9%     | 50.0%         | 21.1%     |               |           | 6. observable ease of following directions (more quickly or easily)? |
| 36.8%     | 39.5%         | 23.7%     |               |           | 7. observable focus during directions?                               |
| 15.8%     | 52.6%         | 31.6%     |               |           | 8. accuracy in following directions?                                 |
| 15.8%     | 55.3%         | 26.3%     | 2.6%          |           | 9. frequency of participation in class discussion?                   |
| 10.5%     | 55.3%         | 31.6%     | 2.6%          |           | 10. appropriateness of participation in class discussion?            |
| 15.8%     | 47.4%         | 36.8%     |               |           | 11. overall on-task behavior?  |
| 26.3%     | 50.0%         | 23.7%     |               |           | 12. participation in the back of the room?                           |
| 8.1%      | 54.1%         | 37.8%     |               |           | 13. overall achievement?   |

**Table 3. Effects of System on Teacher**

| Substantially Increase | Increase | No Change | Decrease | Substantially Decrease | What was the effect on your:                |
|------------------------|----------|-----------|----------|------------------------|---|
| 5.1%                   | 12.8%    | 28.2%     | 46.2%    | 7.7%                   | 15. energy level required for teaching      |
| 12.8%                  | 2.6%     | 7.7%      | 53.8%    | 23.1%                  | 16. voice strain?                           |
| 12.8%                  | 33.3%    | 46.2%     | 7.7%     | 0%                     | 17. need for repetition of oral directions? |
| 7.7%                   | 38.5%    | 41.0%     | 10.3%    | 2.6%                   | 18. self-assessed effectiveness?            |

Table 4 presents the responses to several questions regarding the effects of the system as an instructional tool. Slightly more than half (51.5%) of the students asked to have the system turned on. The teachers found the system useful and easy to use; however, the weight of the microphone was an issue with some teachers. Additional information obtained indicated that, if given a choice, 88.6% of teachers would continue to use the system on a daily basis. Sixty-one percent of the teachers indicated that their systems were equipped with hand-held microphones and 75% percent of the teachers indicated they used the student hand-held microphone if available.

**Table 4. Effects of System as an Instructional Tool**

| Outstanding | Acceptable | Undecided | Poor  | Unacceptable | What was the Sound Field System's effect on: |
|-------------|------------|-----------|-------|--------------|--|
| 38.5%       | 51.3%      | 7.7%      | 2.6%  | 0%           | 20. ease of use?                             |
| 2.6%        | 66.7%      | 12.8%     | 15.4% | 2.6%         | 21. microphone weight around neck?           |
| 35.9%       | 53.8%      | 5.1%      | 5.1%  | 0%           | 22. overall usefulness?                      |

In Table 5, 81.6% of the teachers indicated the on-sight visits by the Evaluation Team provided helpful training to individual teachers in their classrooms. Furthermore, only a small percentage (21.6%) of the teachers indicated they could benefit from additional training from Oakland Schools' staff.

**Table 5. Subsequent Training**

| Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |  |
|----------------|-------|-----------|----------|-------------------|--|
| 23.7%          | 57.9% | 5.3%      | 10.5%    | 2.6%              | 25. During the walk through with Oakland Schools' staff that visited my building, the training I received was helpful in using the equipment in my classroom |
| 2.7%           | 18.9% | 29.7%     | 37.8%    | 10.8%             | 26. I could benefit from additional training by the Oakland Schools staff.   |

There were three open-ended questions asked of teachers. The first question was, "What do you like best about the Sound Field Amplification System?" The following is a summary of the comments made:

- 18 - less voice strain
- 13 - clarity and amplification of voices
- 12 - more/improved student attention & student participation
- 2 - ease of use
- 1 - everything

The second open-ended question was, "How could the Sound

Field Amplification System be improved?" and the following results were obtained:

- 7 - recharging unit for batteries problematic
- 7 - more compact, wireless microphone, easier to use transmitter/battery compartment
- 7 - weight of microphone
- 6 - provide hand-held microphones – at least one or more per room
- 4 - proper functioning of all components
- 2 - service issues on equipment
- 1 - simplify connection to in-room CD player, etc.

When asked, "Do you have additional questions about the Sound Field Amplification System?" the following comments were made:

- 2 - would like to get hand-held microphones for students
- 1 - would like to have the CD player hooked into it
- 1 - needs information on rechargeable batteries: cost, battery life and replacement

## Conclusions

Several conclusions were drawn from the direct observations of the Evaluation Team and the teacher surveys:

1. Teachers were more positive of the training provided by the Oakland Schools staff than the training provided by the manufacturer, which also was perceived as helpful.
2. The sound-field amplification system improved students' attention to directions, accuracy in following directions, participation in class discussion, overall on-task behavior, and participation in the back of the room. To a more limited extent, the system had a positive effect on overall achievement as reported by teachers.
3. The system also had a positive effect on teachers by reducing vocal strain, and energy required for teaching, and by increasing teachers' self-assessed effectiveness. Slightly less than half (46.1%) of the teachers indicated that the system increased the need for repetition of oral directions, which was puzzling. Teachers could have misinterpreted this question due to the unexpected distribution of responses recorded on the Likert scale. This specific result is inconsistent with the overall results obtained from the survey and on-site consultations.
4. The teachers reported that the systems were easy to use and rated their overall usefulness highly. To a lesser extent (although still positive), teachers indicated that the weight of the microphone around the neck was acceptable.
5. For the teachers who did receive a student hand-held microphone, 75% used the microphones with their students. Teachers reported using the student hand-held microphone for show and tell, reading aloud, plays, group activities, reports, and class discussion. They noted that the hand-held microphone was excellent for helping students project their voice, which improved and encouraged class participation. Teachers also commented on the positive effects that the hand-held microphone had on the sharing activities. Using a hand-held

microphone in a classroom enables students to practice communication skills and appropriate social skills (e.g., learning to wait for the microphone to be delivered by the previous speaker and signaling their turn before beginning to speak).

6. For the questions dealing with subsequent training (questions 25 and 26), teachers who responded favorably to question 25 regarding the on-site consultation and training from Oakland Schools staff tended not to want additional training. Apparently, the on-site consultant was sufficient to meet their individual needs. However, according to the responses to question 26, 21.6% of the teachers indicated they would like additional training from the Oakland Schools staff whereas 29.7% were undecided. This represents a substantial number of staff that could benefit from additional training.
7. With regard to question 27, "What do you like best about the sound-field amplification system?" The results clearly indicated that "less vocal strain" (18) was the best feature of the system followed closely by clarity and amplification of their voice (13) and more/improved student attention and student participation (12).
8. For question 28, "How could the sound-field amplification system be improved?" the comments were more diverse. System or equipment issues were cited, including recharging the batteries (7); need for more compact, wireless microphone (7); and weight of the microphone (7) was mentioned most often. Additional hand-held microphones (6), service and functioning of all components (6), and connection to in-room CD Player (2) also was mentioned.
9. Regarding additional questions or comments, two teachers wanted to obtain hand-held microphones, and one teacher needed information on the rechargeable batteries.

## Discussion

The evaluation questions identified at the start of the study were addressed by the data collected in the teacher survey and the personal observations of the Evaluation Team. Oakland Schools' personnel provided the most effective training. A total of 95% of the teachers used the system to some degree. Teachers reported less vocal strain, greater clarity of their voices, and more/improved student attention and participation. In areas that needed improvement, teachers wanted more user-friendly equipment (e.g., lighter neck-worn microphones and wireless compact transmitters that will recharge the batteries without removing the batteries). In regards to service, teachers wanted to know the process of servicing the equipment (e.g., identification of a contact person within each school; procedure for requesting service from the manufacturer and assistance from Oakland Schools staff for training; coordination and implementation of the system). Finally, the on-site consultation by the Oakland Schools staff was cited as the most helpful service in addressing the individual classroom needs (e.g., adjustment of the neck worn microphone, individual speaker settings, volume control, and issues regarding the rechargeable batteries). Those teachers who rated the on-site consultation from the Oakland Schools staff highly also rated the overall usefulness of the sound-field system highly.

This formative evaluation provided useful information to the

Evaluation Team regarding how the systems were being used in the four schools. It also provided feedback and training to teachers, and validated the sound-field amplification systems' effectiveness in helping students listen and participate and enhancing enthusiasm for learning in general. The study also identified those teachers who wanted additional training and underscored the need to identify a lead person in each school who would be the liaison between the manufacturer and the schools. Certain issues regarding equipment were identified and shared with the manufacturer.

### Recommendations

The following recommendations were made based on the results of the teacher survey and the direct observations of the Evaluation Team:

1. The sound field amplification system should be installed and maintained for the teachers who will use the system. Student hand-held microphones should be provided to teachers who request them. Additional microphones should be made available to those teachers who are willing to use more than one microphone in their classrooms.
2. As new equipment becomes available (e.g., wireless teacher microphones and longer lasting batteries), Oakland Schools should assist by informing teachers of the availability of the equipment and provide training as requested.
3. Additional training on how to use the current equipment and incorporate the system in daily practice could be provided on an individualized basis to teachers by Oakland Schools' staff. New teachers could also receive training from Oakland Schools' staff.

Finally, it is recommended that a controlled study using matched schools, comparing schools that have the equipment with those schools that do not have the sound field amplification system, should be completed to determine the effects of the system on student achievement.

### Authors' Note

Since the completion of this study, the results were shared with the manufacturer of the equipment used in all four schools. Based on the results and feedback from the teachers, the manufacturer made several changes to the microphone and transmitter. The weight issue of the microphone and the size and placement of the transmitter were changed to be more acceptable to teachers. The system now offers a wireless option with built-in recharging capabilities. These changes provide teachers with an additional option from the variety of choices already available from this manufacturer.

Additional survey data were collected from teachers in school 1, one year after receiving student hand-held microphones (Appendix B). The results were overwhelmingly positive regarding the use of student hand-held microphones in the classroom. Of the 13 teachers surveyed, 12 were very positive. For example, the teachers indicated student participation in the classroom increased noticeably, and students loved using the "mike."

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**APPENDIX A**  
**Sound Field Amplification System**  
**Teacher Survey**

5/9/2003

The purpose of this survey is to help determine the effectiveness of the *Sound Field Amplification System* on teaching and learning. The information collected will assist us in making improvements for the coming year. Your responses to this survey are confidential; however, if you would like to discuss your opinions of the system with Oakland Schools, please write your name at the end of the survey. Thank you.

- A. School:     Kenwood     Schalm     Whitman     Clawson M.S.
- B. Grade Level Taught:     Kindergarten     1st     2nd     3rd     4th     5th  
     Multiple Grades     Middle School
- C. Did you use *Sound Field Amplification System* during the school year?     Yes     No  
     If "Yes", please go to **Part D**. If "No", please explain why: \_\_\_\_\_

If you did not use the *Sound Field Amplification System*, this completes the survey. Thank you for your help.

- D. Did you receive any **INITIAL TRAINING** in the use of the *Sound Field Amplification System*?     Yes     No  
     If "Yes", please complete the remainder of this section before proceeding. If "No", go to **Part E**.

Please darken in the bubble that best describes your response to the statements below. Please use this scale:

**Very Helpful**                      **Helpful**                      **Undecided**                      **Of Little Help**                      **Not Helpful**  
 1                                      2                                      3                                      4                                      5

- |                          |                          |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| 1                        | 2                        | 3                        | 4                        | 5                        |   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. The initial inservice training provided by the manufacturer in OPERATING the system was. . .                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. The initial inservice training provided by the manufacturer in APPLYING the system in my classroom was. . .          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. The inservice training provided by the Oakland Schools staff in OPERATING the system was. . .                        |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. The initial inservice training provided by the Oakland Schools staff in APPLYING the system in my classroom was. . . |

E. Please rate the effect of the *Sound Field Amplification System* on the **students** in each category below:

**Much More**                      **Slightly More**                      **No Change**                      **Slightly Less**                      **Much Less**  
 1                                      2                                      3                                      4                                      5

- |                          |                          |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| 1                        | 2                        | 3                        | 4                        | 5                        | <b>What was the effect on the students':</b>                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. attention when directions were presented to the whole class?      |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. observable ease of following directions (more quickly or easily)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. observable focus during directions?                               |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. accuracy in following directions?                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. frequency of participation in class discussion?                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. appropriateness of participation in class discussion?            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. overall on-task behavior?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 12. participation in the back of the room?                           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 13. overall achievement?   |
- 14. Do students ask to have the sound system on?     Yes     No

Appendix A. page 2

Sound Field Amplification System Teacher Survey

Page Two

F. Please rate the effect of the *Sound Field Amplification System* on YOU as the TEACHER in each category below:

Substantially Increase      Increase      No Change      Decrease      Substantially Decrease  
 1      2      3      4      5

- What was the effect on your:
- 1  2  3  4  5 15. energy level required for teaching?
  - 1  2  3  4  5 16. voice strain?
  - 1  2  3  4  5 17. need for repetition of oral directions?
  - 1  2  3  4  5 18. self-assessed effectiveness?

Yes  No 19. If given a choice, I would continue to use (or use) the *Sound Field System* on a daily basis.

G. Please rate the effect of the *Sound Field Amplification System* on personal teaching aid or instructional tool in each category below:

Outstanding      Acceptable      Undecided      Poor      Unacceptable  
 1      2      3      4      5

- What was the Sound Field System's effect on:
- 1  2  3  4  5 20. ease of use?
  - 1  2  3  4  5 21. microphone weight around the neck?
  - 1  2  3  4  5 22. overall usefulness?

H. Please rate the STUDENT HAND-HELD MICROPHONE in your classroom.

Yes No (Please use the back of this survey if more room is needed for comments.)

- 1  2 23. Did your system come equipped with a student hand-held mic?
- 1  2 24. Do you use it?

If "Yes", How do you incorporate it into your teaching style/curriculum so that students use it?

If "No", please explain why.

I. Please rate the SUBSEQUENT TRAINING you have received or wish to receive.

Strongly Agree      Agree      Undecided      Disagree      Strongly Disagree  
 1      2      3      4      5

- 1  2  3  4  5 25. During the walk through with Oakland Schools staff that visited my building, the training I received was helpful in using the equipment in my classroom.
- 1  2  3  4  5 26. I could benefit from additional training by the Oakland Schools staff.

J. Please respond to the following questions. If you need more room, please use the back of this survey.

27. What do you like best about the *Sound Field Amplification System*?

28. How could the *Sound Field Amplification System* be improved?

29. Do you have additional questions about the *Sound Field Amplification System*? If so, please describe.

If you would like to share your opinions with Deborah Edwards from Oakland Schools regarding the system, please provide your name and phone number.

Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_

FOLLOW-UP HAND HELD MICROPHONE SURVEY

WALT WHITMAN ELEMENTARY SCHOOL

*School 1*

Classroom Grade \_\_\_\_\_

1. Do your students use the hand held microphone when giving a presentation? \_\_\_ yes \_\_\_ no
2. Is the hand held microphone consistently used during class discussion time? \_\_\_ yes \_\_\_ no
3. Overall, do you think the hand held microphone has been a positive addition to the communication and learning process in your classroom? \_\_\_ yes \_\_\_ no

Comments:

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Would you like to be contacted by your audiologist regarding any of the above?

Name: \_\_\_\_\_ Phone: \_\_\_\_\_