

GRANT REPORT
2008 IPFW SUMMER GRANT FOR INSTRUCTIONAL DEVELOPMENT
Sharon Egly, MAT, CCC-SLP
Continuing Lecturer, Director IPFW Communication Disorders Clinic
December 2008

I was awarded a *Summer Grant for Instructional Development* by the *Center for the Enhancement of Learning and Teaching (CELT)* at IPFW in summer 2008. The grant was funded for the project entitled *Teaching a Fundamental Clinical Skill*.

Project and Rationale:

The grant project focused on developing a tool that could be used in at least five courses at the undergraduate level and in clinical preparation at the graduate level. This newly developed tool is a fifteen-minute DVD instruction on performing an oral/facial mechanism evaluation stressing the parameters of structure, strength, mobility, and precision of movement of the oral/facial mechanism. A recording form for the evaluation was also developed for the same factors. These new tools benefit students by utilizing best practices and providing a significant improvement over the dated material by strongly emphasizing these specific parameters.

The clinical skill of performing an oral facial mechanism evaluation is important because it is a fundamental part of every clinical assessment in speech/language pathology. Determining the adequacy or inadequacy of the oral/facial mechanism impacts the development of speech/language goals for the client and, subsequently, his/her overall progress. Because an examination of the face and oral cavity is often seen as a more “intrusive” procedure with a client, students are often timid about performing this evaluation. Having an instructional tool stressing important information, repeated exposure to the information as well as repeated practice is needed to become confident and efficient with the skill so that accurate data can be obtained and reported.

Development of the DVD Project:

In May, subjects for the DVD were obtained and a mutually agreeable date in June was found for doing the filming. This followed in June with securing participant’s or parents’ permission for filming and filming the three subjects. Because of scheduling conflicts, editing of the DVD could not be started until early August. Editing on the overall DVD using the three clients was completed by late August.

Film footage was taken with as a master clinician performed oral/facial mechanism evaluations on three typical subjects: adult, school-age, and preschool age. The footage was then edited into a 15 minute DVD using all three clients to demonstrate methods in eliciting oral motor movements as well as the clients' responses. Using the three typical clients of differing ages, awareness was drawn to the different skill levels (for mobility and precision of movement) of the clients based on their ages. A narration accompanied the DVD at times detailing the parameters the student needed to note. At other times, the master clinician is seen giving commands and/or interacting with the client.

In addition to the DVD, a recording form for the results was developed that also followed the parameters of the evaluation (integrity of the structure, strength, mobility and precision of movement). Trial runs of rough drafts of the form were completed by two clinicians in private practice during July and August and revisions were made to the form based on feedback provided. The design of the form allows the clinician to easily record findings by: 1) listing the command to get the behavior from the client, 2) giving the words "yes" or "no", "typical" or "atypical" to circle record findings, and an area for writing explanations of atypical results. The format ultimately allows the clinician to view at a glance if any one or more areas of the exam falls outside the "typical" range. These judgements will then warrant further evaluation or a recommendation to another professional (dentist, neurologist, etc.), and the clinician records such recommendations in the summary section of the form.

The Study:

The plan for the project in the fall semester was to conduct a survey of the students in two different Audiology and Speech Science classes (a senior level only class and a class of juniors and senior level students). The majority of these students had been previously exposed to the dated version of an oral facial mechanism evaluation earlier in their AUS education (minimum of 8 months earlier). Confidence levels were to be reported prior to viewing the newly developed DVD. Later in that class period or during the following class period the DVD would be shown, a practice period provided, and a second determination of their confidence levels in performing the evaluation would be reported. The students were not given a "grade" based on their pre and post DVD survey responses. The survey consisted of the following four questions and response levels:

Pre/post DVD Survey:

How confident are you that...

- 1) Given instruction & practice, you can perform an accurate oral/facial mechanism evaluation on a client?
- 2) By giving instructions to the client, you will elicit the responses you need to obtain accurate data for the evaluation?
- 3) You will be able to elicit responses from young clients, those who may refuse to participate, or who exhibit more difficulty behaviors?
- 4) You will accurately record sufficient information on the evaluation form in order to make sound clinical decisions?

5 = very confident that I can do it

4 = confident that I can do it

3 = neutral – neither confident nor unsure

2 = unsure that I can do it

1 = know that I cannot do it.

Subjects:

Group 1.

The first use of the survey occurred in the AUS 449 (Preclinic) class. The DVD was used as a review for these senior level students who were likely to enroll in a clinical practicum experience in the spring 2009 semester. (These students will perform the exam during the clinical semester on a client with whom they will be treating during the semester 2009.) They completed one practice evaluation on a fellow student, saw the DVD again and performed an examination on a fellow student during a different class period, and completed the post survey at that time. Because individual numbers were not assigned, only group information can be extrapolated from this data. There were 16 students who participated in this class.

Group 2.

Students in the AUS 430 (Assessment in Speech Language Pathology) consisted of senior level students. Sixteen senior students were enrolled in both the preclinic class and the Assessment class. In addition to these students, three other senior level students were enrolled in the Assessment class only. All students, regardless if they were in the preclinic class or not were to complete the pre/post DVD confidence surveys, again see the DVD, perform the practice evaluation and complete the surveys in the Assessment class.

Students in the Assessment class followed the project procedure and completed the pre DVD survey and then viewed the DVD and had a practice period before completing the post DVD survey. In addition, the students in the Assessment class were given an assignment to complete five oral/facial mechanism evaluations – three on adult and two on children. Supplies for the examinations were provided for each of the students. Following each evaluation, the student completed a one-minute reflection on his/her level of confidence in performing the examination. The students were not given a “grade” on the pre/post DVD surveys. Because of the nature of actually doing the examinations and completing paperwork for the assignment, students did earn a grade from their instructor based on the completeness of the paperwork (oral/mechanism evaluation form).

In order to track the confidence levels of individuals, students in the assessment class were assigned a number. This number was recorded at the top of the confidence reflection papers in order to gather the research. Only the student and instructor knew the number, which was assigned to the student; the researcher was not given this information. Data was then gathered by the instructor and given to the researcher.

Results: Group Data on Pre and Post DVD Surveys:

Group 1 Survey Data.

In the AUS 449 class all sixteen students took the pre and post DVD surveys. Post surveys scores indicated that the students felt more confident in performing the evaluation

The two areas of biggest concern were for questions 3 and 4 (see data below):

Survey Questions Group one	Confidence Rating Score	Pre DVD Data*	Confidence Rating Score	Post DVD Data*
#1 Given instruction & practice, you can perform an accurate oral/facial mechanism evaluation on a client?	1 = 0 2 = 0 3 = 3 4 = 12 5 = 1	3.88	1 = 0 2 = 0 3 = 0 4 = 4 5 = 12	4.81
#2 By giving instructions to the client, you will elicit the responses you need to obtain accurate data for the evaluation?	1 = 0 2 = 0 3 = 4 4 = 10 5 = 2	3.88	1 = 0 2 = 0 3 = 0 4 = 5 5 = 11	4.6
#3 You will be able to elicit responses from young clients, those who may refuse to participate, or who exhibit more difficulty behaviors?	1 = 0 2 = 2 3 = 8 4 = 4 5 = 2	3.4	1 = 0 2 = 1 3 = 2 4 = 6 5 = 7	4.19
#4 You will accurately record sufficient information on the evaluation form in order to make sound clinical decisions?	1 = 0 2 = 0 3 = 5 4 = 6 5 = 5	4.0	1 = 0 2 = 0 3 = 1 4 = 5 5 = 10	4.56

*5 = very confident that I can do it; 4 = confident that I can do it; 3 = neutral – neither confident nor unsure
 2 = unsure that I can do it; 1 = know that I cannot do it.

The graph of the data can be seen in Appendix A.

Group 2 Survey Data

In the AUS 430 class 9 of 19 students qualified for the study by completing the pre and post DVD surveys as well as the five one minute reflections following the evaluations of their five clients within the allotted time frame. Post surveys scores of these nine students indicated they felt more confident in performing the evaluation after seeing the DVD and having the practice period.

See chart below:

Survey Questions Group 2	Confidence Rating Score	Pre DVD Data*	Confidence Rating Score	Post DVD Data*
#1 Given instruction & practice, you can perform an accurate oral/facial mechanism evaluation on a client?	1 = 0 2 = 0 3 = 1 4 = 5 5 = 3	4.22	1 = 0 2 = 0 3 = 0 4 = 2 5 = 7	4.78
#2 By giving instructions to the client, you will elicit the responses you need to obtain accurate data for the evaluation?	1 = 0 2 = 0 3 = 0 4 = 5 5 = 4	4.44	1 = 0 2 = 0 3 = 0 4 = 3 5 = 6	4.67
#3 You will be able to elicit responses from young clients, those who may refuse to participate, or who exhibit more difficulty behaviors?	1 = 0 2 = 1 3 = 3 4 = 4 5 = 1	3.6	1 = 0 2 = 0 3 = 1 4 = 2 5 = 6	4.56
#4 You will accurately record sufficient information on the evaluation form in order to make sound clinical decisions?	1 = 0 2 = 0 3 = 2 4 = 5 5 = 2	3.6	1 = 0 2 = 0 3 = 1 4 = 2 5 = 6	4.56

*5 = very confident that I can do it; 4 = confident that I can do it; 3 = neutral – neither confident nor unsure
 2 = unsure that I can do it; 1 = know that I cannot do it.

See Appendix B for a graph of the data.

Group 2 One Minute Reflections:

On the one-minute reflection papers, students recorded type of client (adult, school-aged, preschool age) and the number of the evaluation (1st, 2nd, 3rd, etc.). Three questions followed:

- What did you do to get a behavior?
- Did it work?
- If not, what do you think would work better?

Again, the confidence level of 1-5 used earlier was employed for students to record their reactions to the following questions:

- 1) I performed an accurate oral/facial mechanism evaluation on this client.
- 2) By giving instructions to the client, I elicited the responses needed to obtain accurate data for the evaluation.
- 3) I elicited responses from young clients or one who may refuse to participate or one exhibited more difficult behaviors.
- 4) I accurately recorded sufficient information on the evaluation form in order to make sound clinical decisions.

Data on One Minute Reflections:

All scores reported on one minute reflections were either “confident” or “very confident” for all questions with the exception of one student reporting a confidence level of “3” (neutral) when reporting for question #3 when s/he evaluated a preschooler. Of note, this student had previously (post DVD survey).reported feeling “very confident” that she could elicit responses from young children but when actually performing the exam on a preschooler, she felt less confident.

4 of 9 students reported average confidence levels at 4.5 or higher for all five evaluations performed. These students may have been in the group of students who were in both AUS 449 & 430 and who saw the DVD twice and had practiced the evaluation twice prior to doing the assignment and completing the confidence reflection papers.

Reflections on Adult Clients

66% (n = 6) of the students felt “very confident” after performing the third adult evaluation. Two more students confidence levels increased (4.33 and 4.67); however did not reach the “very confident” level. One student reported feeling “confident” (4) with the third exam while the two earlier exams were rated as “very confident.” It may have been that the adult client in that exam was less willing to participate in the evaluation, however this is only speculation.

Reflections on School Aged Clients

4 of the 9 students who reported being “very confident” in evaluating adults did not decrease their level of confidence with the school age evaluations that followed. None of these students chose to do a preschool evaluation.

8 of 9 students reported confidence levels equal to or better than they had on their previous adult exams when they performed the evaluation on the school age child. This confidence increase may be due to the continued exposure and performance of exams on previous subjects.

Two students reported feeling slightly less confident in examining school aged clients, but both reported feeling “confident.”

Reflections on Preschool children

Because preschool children are sometimes more difficult to gain cooperation to perform the tasks of the evaluation, it was interesting to note that only 2 of 3 students chose to do evaluations on preschool children. This was noted in the confidence level of 2 of the students in response to question #3. Student 1. gave herself a “3” feeling “neutral with eliciting responses from young clients with the preschool client but a “5” with the school aged child. Student 2 gave herself a “4” with the preschool child and a “5” with the school aged child. The third student who evaluated a preschooler rated her confidence level as a “5” for both the preschool child and the school aged child on this same question. See chart below:

Data on the short answer questions:

	Eval. 1	Eval. 2	Eval. 3	Eval. 4	Eval. 5
What did you do to get a behavior?					
Modeled	9	7	7	8	7
Read form	9	8	5	1	3
Asked/told what to do	1	1	3	6	3
No response	0	0	0	1	1
Did it work?					
Yes	9	9	9	7	8
No	0	0	0	1	0
No response	0	0	0	1	1
If not, what would have worked better?					
No response	N/A	N/A	N/A	2	1

Noted was that with familiarity of the evaluation, students tended to rely less on reading the form to know what commands to use to elicit the behavior needed. Modeling was continued consistently throughout the evaluations. Reading/telling/asking the client and having a model to follow was at minimum 95.55% effective in eliciting responses needed. (96.67 if the “no response” data is removed.

Implications for future teaching assignments:

Use of the DVD and companion form in teaching the parameters and skills needed to do an oral facial examination along with adequate practice increases the confidence levels of undergraduate students as they prepare for working with future clients.

While an assignment of five oral/facial mechanism evaluations increased the confidence levels of most students, more practice could be of value to those who continue to feel less than confident in performing the evaluation especially on younger clients. Encouraging more exposure to preschool clients or those with additional considerations (mental handicaps, shyness, etc.) would be beneficial for students who are nearing their first clinical semester.

Faculty needs to continue to stress the importance of emphasizing the parameters of structural integrity, strength, mobility and precision of movement to the students during presentation of the material, during in class practice, and in giving feedback on performance.

Now that the overall DVD is completed the intent is to start collecting data with the students’ first exposure to the oral/facial mechanism evaluations (AUS 304 Anatomy & Physiology of the Speech & Hearing Mechanism) and compare it to the confidence levels when these students are seniors and enrolled in a preclinical course.

During the semester, three other DVDs were later developed from the original or subsequent footage for several reasons. Each of the DVDs will allow the student to view an evaluation in “real time” with each client, as working with a younger client can be much different than working with an adult. It also allowed the student to watch how the clinician adjusts commands, models, and redirects behaviors with a younger client when the client is uncooperative. These additional DVDs will be available to be incorporated into the learning situation upon their completion. The three DVDs include:

- An adult evaluation
- An evaluation of a school aged child
- An evaluation of a preschool aged child.

In addition, material is being collected to produce a typical/atypical DVD that can be used during a course to highlight differences between typical and atypical. This DVD could also be used for testing purposes.