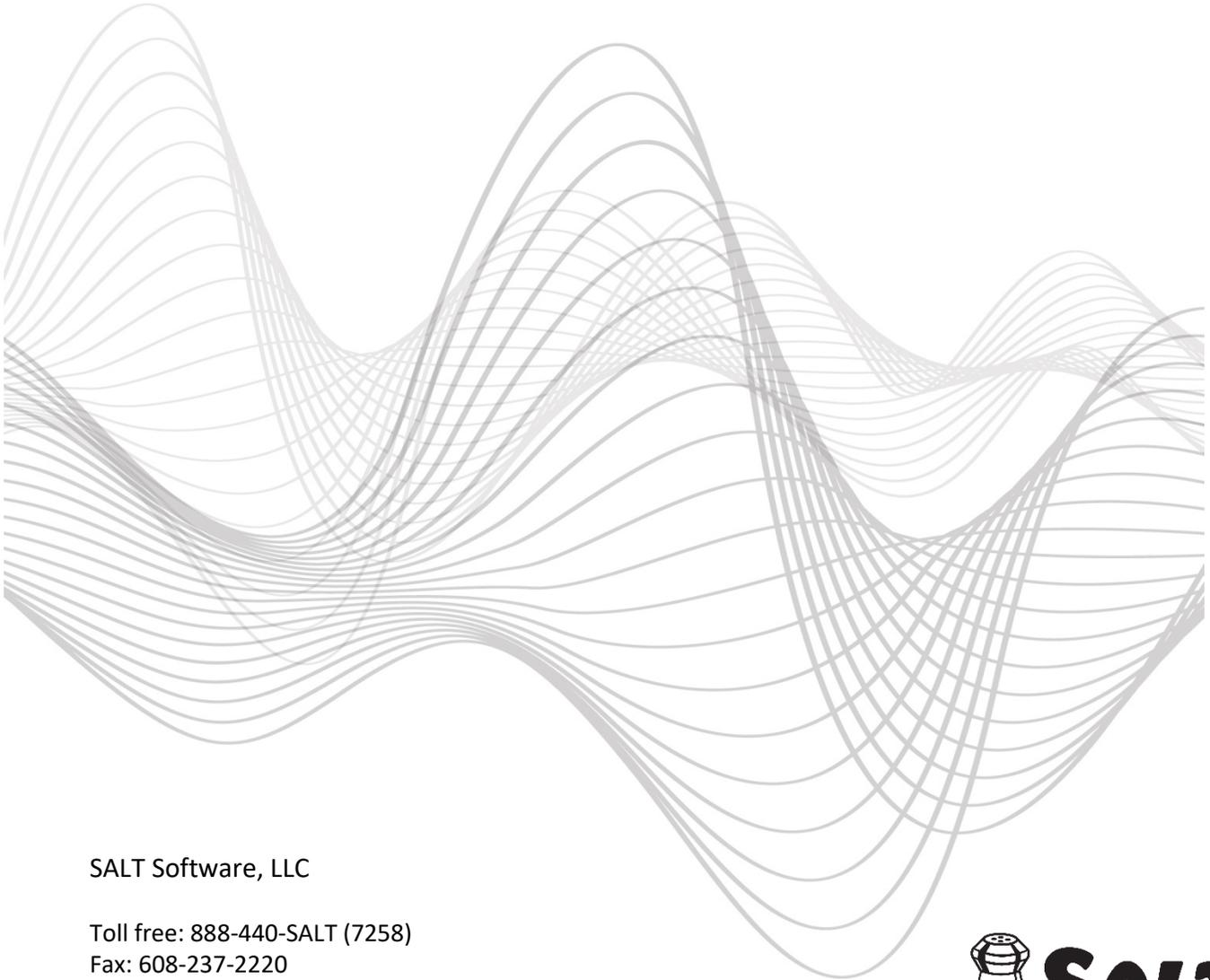


STEP-BY-STEP EXERCISE

Comparing a Transcript to Database Samples



SALT Software, LLC

Toll free: 888-440-SALT (7258)

Fax: 608-237-2220

support@saltsoftware.com

www.saltsoftware.com



Comparing a Transcript to Database Samples

A. Start SALT with Carter's Transcript



1. The SALT program begins with the Getting Started window. In this exercise you will be starting with one of the sample transcripts. Click the **Open** button and you are presented with the Open dialogue box
2. Unless you changed the default transcript folder, the *My SALT Data\Transcripts* folder located within your *Documents* folder is displayed. Open the **Samples** folder and then the **Lesson Samples** folder.
3. Select the transcript file **Carter PGHW.slt** from the "Lesson Samples" folder and then click the **Open** button (or double click "Carter PGHW.slt").

The transcript "Carter PGHW.slt" should be displayed. At the bottom right-hand side of the window, the analysis set should be "C&I Verbal Utts" and the transcript cut should be "Entire Transcript". If this is not the case, use the Setup menu to make appropriate changes. Carter is retelling the story *Pookins Gets Her Way* by Helen Lester (1987).

B. Compare transcript to samples from the Narrative Story Retell database

1. Select the Database Comparison Set.
 - Before SALT can generate any of the database reports, you must select the database samples to use for the comparison. Select **Database menu** → **Select Database Samples and Settings**. You are presented with the "Select Database Samples" dialogue box. Notice there are 3 steps.

- STEP 1: Select Database

Carter's language sample was elicited and transcribed following the protocol for the Narrative Story Retell database retelling the story *Pookins Gets Her Way* (PGHW). The Narrative Story Retell database and the PGHW subgroup should be pre-selected based on the plus lines (+Context: NAR and +Subgroup: PGHW) at the top of Carter's transcript.

- Click the **Select Built-In Database** button to view the list of available databases from which you could compare your sample. Always make sure that the selected reference database is appropriate for your sample. If the Narrative Story Retell database was not preselected, select it from the list and click Open. Otherwise, select Cancel or click X in the upper right-hand corner.
- Click the **Database Snapshot** button for a description of the Narrative Story Retell database followed by a summary of the database records. Scroll to the bottom and notice that there are 101 samples in this database retelling PGHW, ranging in age from 7;0 to 8;11.
- Press **OK** to close the database snapshot dialogue box.

- STEP 2: Select age, grade, and/or gender criteria

Use this section to select the subset of database samples that match Carter's age, grade, and/or gender. Notice the transcript information at the bottom of the dialogue box:

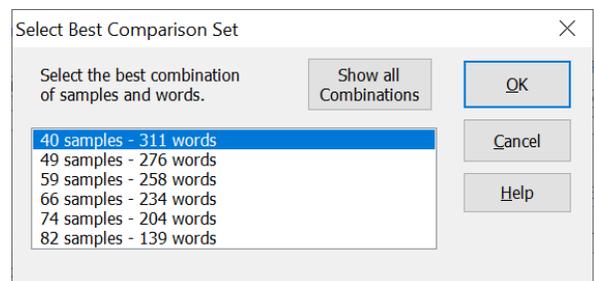
Carter PGHW (Child), NAR (PGHW): CA = 8;1, Grade 2, Male, 311 NTW, 40 C&I Verbal Utts, Time: 5:32

The transcript filename is “Carter PGHW”. The target speaker label, taken from the \$ speaker line at the beginning of the transcript, is “Child”. This is a narrative sample based on the story *Pookins Gets Her Way* (PGHW). Carter is male, aged 8 years and 1 month. The sample lasted 5-minutes and 32 seconds and contains 311 NTW (number total words) and 40 C&I Verbal Utts (complete and intelligible verbal utterances). Carter’s age, gender, and sampling context came from the plus lines at the beginning of the transcript.

- Look at the criteria selections. For questions about any of the criteria selections, click the **Help** button in this dialogue box for details.
 - The **Age match** is set at plus or minus 6 months. Since Carter’s age is 8;1, the database participants must be in the age range of 7;7 to 8;7 to be included. The grade and gender matches are not selected.
 - Click the **Find Matched Samples** button to find out the number of database samples that match the criteria you selected. Notice that there are 82 samples that are within 6 months of Carter’s age.
- STEP 3: Select method used to equate samples by length

Some language measures, such as number of different words (NDW) and number of errors, may vary significantly depending on the length of the sample. The longer the sample, the more opportunity for using different words and for making errors. For measures affected by the length of the sample, it is important to equate the database samples by length.

- **Same number of total words** is pre-selected as the default method of matching samples by length. Notice at the bottom of the dialogue box that Carter’s sample contains 311 NTW. Using this default selection, there are two ways to equate Carter’s sample with the matching database samples.
 - 1) Cut the matching database samples at 311 NTW to match the length of Carter’s sample. Shorter database samples which do not contain at least 311 NTW would not be included.
 - 2) Cut both Carter’s sample and the matching database samples to a fewer number of total words, e.g., 250 NTW. This option would be used if too many of the database samples would be excluded using the first method.
- Select **Same number of total words** and click **Find Equated Samples**. You are presented with a dialogue box containing six options. The first option, “40 samples – 311 words” indicates that 40 of the 82 age-matched samples contain at least 311 NTW. The last option, “82 samples – 139 words” indicates that, in order to include all 82 samples, all the samples would be cut at 139 words.



You need to decide whether it would be better to have more database samples included in the comparison set or more words included in the analyses.

As a rule of thumb, you should have at least 20 samples in the comparison set.

- Click **OK** to select the first option, “**40 samples - 311 words**”. The 40 database samples will be cut at the point of 311 NTW. If the 311th word occurs in the middle of an utterance, all word-based measures are calculated to the point of the 311th word. All utterance-based measures are calculated up to the end of the utterance containing the 311th word.
- Click **OK** to close the dialogue box. The Database menu is displayed and the database reports are now available.

2. View the *Standard Measures Report*.

- Select **Database menu → Standard Measures Report**.
- You are presented with a dialogue box to select a length option to use for the comparison.
 - Entire transcript: generate this report, comparing Carter’s entire sample with the entire sample of all 82 age-matched samples.
 - Advantage: uses all 82 age-matched samples.
 - Disadvantage: the samples will not all contain the same number of words and several of the measures may be significantly affected by the length of the sample.
 - Equated by length: generate this report, comparing Carter’s entire sample (consisting of 311 words) with the first 311 words in the 40 samples containing at least 311 total words.
 - Advantage: all measures are calculated on the same number of total words which levels the playing field.
 - Disadvantage: comparison outcomes are based on only 40 of the 82 age-matched samples.

Notice “Entire transcript” is “recommended”. This is because the disadvantage of not equating the samples by the same number of words is minimized. These are all story-retell samples based on the same story with a logical end (*ends when the speaker completes retelling the story*). Contrast this with open-ended sampling protocols, such as conversations, where there isn’t a logical ending point.

- Select **Entire transcript** and click **OK**.
- After the selected database samples are analyzed, you are presented with the *Standard Measures Report (SMR)*.

Information about the transcript is displayed in the upper left-hand corner of the report. The database information is displayed in the upper right-hand corner of the report. The *Database menu → Standard Measures Report* contains the same measures as the *Analyze menu → Standard Measures Report*. The difference is, in this report, Carter’s sample is compared to the 82 age-matched samples selected from the reference database.

There are several things to notice about the format and organization of this report:

- The target speaker’s (Carter’s) score and standard deviation are listed first, followed by the database statistics for the selected database participants.
- Some of Carter’s scores are highlighted and followed by either one or two asterisks. These values represent strengths or weaknesses. A single asterisk flags those values which are between one and two standard deviations* from the database mean. Double asterisks flag those values which are two or more standard deviations from the database mean.
- The following measures are italicized: *Number Total Words (NTW)*, *Number Different Words (NDW)*, *Number of Omissions*, and *Number of Error Codes*. They are italicized as a warning that these measures count occurrences and can be significantly affected by the different sample lengths.

**The default setting for the standard deviation interval is 1SD. The standard deviation interval setting can be changed in the “Select Database Samples and Settings” dialogue box. If, for example, you set the interval to 1.5 SD, the database analyses reports will highlight values 1.5 or more SD from the database mean.*

- Look through the report.
 - TRANSCRIPT LENGTH. Carter used marginally more utterances, words, and time to retell the story than his age-matched peers.
 - INTELLIGIBILITY. Carter’s sample was slightly less intelligible. Note that unintelligible segments may reflect the quality of the recording.
 - SYNTAX/MORPHOLOGY. Carter’s mean length of utterance (MLU) in words and morphemes was slightly lower than the comparison group’s. Verb use, a gross measure of sentence complexity, was similar to his peers in that Carter’s utterances included at least one verb. However, the number of verbs per utterances value is highlighted as being 1 or more standard deviations lower than the database peers. Because the mean verbs/utterance measure is low, you may consider applying the Subordination Index (SI) coding to this transcript (*refer to the step-by-step exercise on subordination index for details*). It takes just a few minutes and provides a more accurate measure of sentence complexity via clausal density.
 - SEMANTICS. Carter’s transcript contained about the same NTW but slightly more NDW than the database transcripts, indicating that he used a wider range of vocabulary words to retell the same story. “Moving-average NDW” is computed by averaging the NDW for each set of 100 words (Moving-Average NTW) starting with the first 100 words, then looking at words 2-101, then 3-103, and so on until it looks at the last 100 words. Note that the “Moving-Average NDW” score is highlighted as being more than 1 standard deviation higher than the database value, confirming that Carter uses a wider range of vocabulary than his peers.

Compare the NTW value of 311 in the SEMANTICS section with the “All Words Including Mazes” value of 479 in the TRANSCRIPT LENGTH section. Why the large difference? “All Words Including Mazes” counts all the words in the transcript while NTW counts those words in the main body (*excludes mazes*) of the current analysis set (*C&I Verbal Utts*). Carter’s sample included a significant number of words in mazes and 6 of his 46 utterances were not in the current analysis set.

- VERBAL FACILITY. Carter paused slightly more than his database peers and had significantly more words in mazes (filled pauses, repetitions, revisions). The high number of mazes is an indication that Carter may have word finding and/or utterance formulation difficulties.
 - ERRORS. Carter’s sample contained a slightly higher percentage of utterances with errors. Notice that the “Number of Error Codes” is highlighted as being significantly higher than the database samples. This measure is italicized as a warning that the number of error codes may be a function of Carter’s longer sample and may not be significant.
- For questions on any of the language measures in this report, refer to the built-in help screen ( or F1).

3. Save the *Standard Measures Report* as a PDF file.

- Windows® OS
 - Click the save icon  or select **File menu → Save**.
 - You are prompted to select the format of the file. Select **PDF – Portable Document Format**.
 - Make sure the box labeled **Display report after saving** is checked.
 - Click **OK** to close the dialogue box.
 - Select the location where you would like the report saved. By default, this is in the *My SALT Data/Reports* folder. The default report filename is made up of the sample name plus *_DBSMR* (database standard measures report). You can change both the location of the report and the report filename.
 - Save and view the report.
- Mac OS
 - Select **File menu → Print**. The PDF option is included in the Mac print dialogue box.

4. Re-run the *Standard Measures Report*.

It may be informative to run this report again selecting “Equated by Length” to see the outcomes when comparing Carter’s longer sample to database samples equated by length.



- Select **Equated by length** and click **OK**.

Compare the results of the two reports. Pay particular attention to those variables that were italicized (because they may be significantly affected by sample length) when compared to the entire transcript.

5. View the *Performance Report*.

- Select **Database menu → Performance Report...**

The *Performance Report* data is generated from the various reports within the Database and Analyze menus used to create a cohesive narrative about the speaker’s expressive language performance, noting both strengths and challenges. This is the only database report which can be edited in the report window. The report can also be saved in RTF format which can be opened using Microsoft® Word, or copied and pasted into electronic record-keeping programs.

- You are prompted with the “Performance Report Settings” dialogue box. The speaker is referred to throughout the report by first name. The speaker’s first name, **Carter**, is taken from the “+ Name” entry near the beginning of the transcript. Had it been missing, you would have the opportunity to enter the speaker’s first name. Similarly, the speaker’s gender, **Male**, is taken from the “+Gender” entry in the transcript. The report contains many instances of “he/she/they”, “him/her/them”, and “his/hers/theirs”, based on the speaker’s gender.
 - **Check the box labeled “Include list of relevant reports”**. When this option is selected, a list of the specific Database and Analyze reports used to generate the *Performance Report* is included at the end of the Performance Report.
 - Click **OK** to exit the dialogue box. The *Performance Report* is displayed.
 - Read through the report. The first paragraph describes the elicitation task. It also indicates the measures compared with the entire transcript of the 82 age-matched samples. A few measures, such as total pause time and number of errors, may be affected by sample length. These measures are based are compared with the 40 samples matched in length by the same number of words. The subsequent paragraphs report outcomes following the format of the Standard Measures Report. The end of the report contains a list of the analyses reports used to generate this report.
 - You can edit to this report to suit your needs, perhaps adding your clinical impressions.
 - Note that the text in this report can be copied and pasted into a word processor or directly into your evaluation.
 - For questions about this report, refer to the built-in help screen ( or F1).
 - If you want to print this or any other report, click the print icon  or select **File menu** → **Print....**
6. Save the *Performance Report* as an RTF file and open it in Microsoft® Word.
- Click the save icon  or select **File menu** → **Save**.
 - You are prompted to select the format of the file. Select **RTF – Rich Text Format (Word)**. Make sure the box labeled **Display report after saving** is checked.
- Note that the *Performance Report* is the only database report which can be edited or saved as an RTF file.
- Click **OK** to close the dialogue box and save the report.
 - You are prompted to save the report on your computer. The default location to save SALT reports is in the folder *My SALT Data/Reports* within your *Documents* folder. Keep this default or select a different location. The filename for this report is **Carter PGHW_DBPR.RTF** where DBPR stands for

“**Database Performance Report**”. Click **Save** to save the report.

- Your report is opened in Microsoft® Word or whatever program is associated with RTF files. Close this window and go back to the SALT window.

7. View the *Quick Look* report.

- Select **Database menu → Quick Look**.
- As with the *Standard Measures* Report, you are presented with a dialogue box to select a measure of length for the database comparison. Select **Entire transcript** and click **OK**.
- The *Quick Look* display is a chart of relative strengths and weaknesses from several important variables. You can see at a glance that Carter’s vocabulary diversity is a strength and his mazing is a weakness.

8. View the *Transcript Length and Intelligibility* report.

- Select **Database menu → Transcript Length & Intelligibility**.
- You are again presented with a dialogue box to select a measure of length for the database comparison. This time “Equated by length” is recommended because this report includes many measures that count occurrences and may be significantly affected by the different sample lengths.

Select **Equated by length** and click **OK**.

Note that Carter’s sample contained exactly 311 NTW and was not cut. Instead, the database samples were cut at 311 NTW to match the length in words of Carter’s sample.

- Look through the report paying special attention to the intelligibility values where
 - X words – unintelligible word
 - XX words – unintelligible segment (more than a word, less than an utterance)
 - XXX words – unintelligible utterance

9. View the *Verbal Facility Summary* report.

- Since 25% of Carter’s words are in mazes, it’s important to look at these mazes in more detail. To do this, select **Database menu → Verbal Facility Summary**.
- When presented with the dialogue box, select **Equated by length** and click **OK**.
- All measures in this report are compared to the 40 database samples that were cut to 311 NTW to match the length of Carter’s sample. This report is divided into four sections: rate summary, pause summary, maze summary, and abandoned utterances.

- Look at the Pause Summary. Carter's sample contained a significantly high number of within-utterance pauses. He paused for 30 seconds compared with 7 seconds in the database samples (to produce the same 311 NTW). Long and/or frequent pauses may indicate word finding or utterance formulation difficulties.
- Look at the Maze Summary section of this report and notice that Carter produced a large number of mazes at the word and phrase levels. Revisions, especially at the phrase level, may be an indication of utterance formulation difficulty. Repetitions may indicate either word finding or utterance formulation difficulties.
- For questions about this or any other report, refer to the built-in help screen ( or F1).

10. View error codes.

- Carter produced a high number of errors in his language sample. The errors summary is an important follow-up report. Select **Database menu** → **Errors Summary**.
- When presented with the dialogue box, select **Equated by length** and click **OK**.
- This report lists the specific error codes and their frequency within the transcript.
- Suppose you want to see the utterances containing those error codes. To do this, select **Analyze menu** → **Standard Utterance Lists**.
- There are a number of lists to choose from. Notice the default Speaker is the 1st speaker (Child who, in this case, is Carter) and that the Utterance Base is set to Total utterances. Select **Utterances with... Error Codes**, and click **List** to generate the list of all utterances containing error codes. Do you notice any patterns?

C. Change the Database Comparison Set

1. For practice, refine the database comparison set and re-run the *Standard Measures Report*.

- STEP 1: Select database
 - Select **Database menu** → **Change Database Samples and Settings** and you are presented with the "Select Database Samples" dialogue box.
- STEP 2: Select age, grade, and/or gender criteria
 - Narrow the **Age match** from plus or minus 6 months to plus or minus 4 months. Do this by clicking the down-arrow to the right of the number 6 twice until it reads **4 months**.
 - Click the **Find Matched Samples** button again to see how many of the database samples are with 4 months of Carter's age. Notice that 60 samples match.
 - Check the **Grade match** and then click **Find Matched Samples** to see how many of the 60 samples match Carter's grade, i.e., 2nd grade. Notice that 59 samples match. This indicates that 1

of the 60 samples either did not have grade specified or the participant was not in the 2nd grade.

- Check the **Gender match** to restrict the comparison set to males only. Notice the “M” was automatically filled in to match the gender value of the transcript (+Gender plus line).
- Click **Find Matched Samples** and notice that 36 of the matching database participants are male.

There is a tradeoff between matching the samples more closely by age, grade, and gender and the number of samples selected.

- STEP 3: Select method used to equate samples by length
 - Select **Same number of analysis-set utterances (C&I Verbal Utts)** to equate the samples by the number of utterances.
 - Click the **Find Equated Samples** button to see how to equate Carter’s sample, which contains 40 C&I Verbal Utts (*refer to transcript information at the bottom of the dialogue box*), with the matching database samples.

You are presented with a list of choices. Notice that only 14 of the 36 samples contain at least 40 utterances.

- As a rule of thumb, you should have at least 20 participants in the comparison set. The first option has only 14 participants with the maximum number of utterances. The second option has 20 participants with 36 utterances. If we select the second option, we would have 20 participants in the comparison set but only the first 36 utterances of both Carter’s sample and the database samples would be used.

Recall that we have restricted the comparison set to 2nd grade males. Rather than select any of these comparison sets, let’s go back and change that.

- Click **Cancel** to go back to the previous dialogue box.
- Leave the Age match at plus or minus 4 months and the Grade match at 2nd grade. We have found that most language measures are not affected by gender so uncheck the **Gender match**.
- Click **Find Matched Samples** and notice that 59 of the database participants are selected.
- Click the **Find Equated Samples** button and you are presented with a list of choices.
- For this exercise, you will maximize the number of utterances by selecting the first option, **28 samples – 40 utterances**. Make sure the first option is highlighted and then press **OK**. You are returned to the previous dialogue box. The 28 database samples will all be cut at the point of 40 complete and intelligible verbal utterances to match the length of Carter’s sample.

- Click **OK** to exit the dialogue box. The Database menu is displayed and the database reports are available.
- View the *Standard Measures Report*.

- Select **Database menu** → **Standard Measures Report**.
- When prompted to select what the report is based on, select **Entire transcript** and click **OK**.
- After a short delay, the report is displayed. The 59 samples are matched by age (+/- 4 months) and grade (2nd). Compare this report with the previous one.

D. Change the Standard Deviation Interval

Recall that measures which are at least 1 standard deviation (SD) above or below the database mean are highlighted and followed by one asterisk. Two asterisks are used to flag measures that are at least 2 SDs from the means. Suppose, for example, that you work for a school district that uses 1.5 SDs as significant. You can change the SD setting so that measures that are at least 1.5 SDs above or below the mean are followed by one asterisk and measures that are at least 3 SDs from the mean are followed by two asterisks.

1. Change the SD setting.

- Select **Database menu** → **Change Database Samples and Settings**.
- The standard deviation interval setting is located on the right side of the dialogue box. Change the SD from 1 to **1.5** and click **OK**.

2. View the Standard Measures Report with the new comparison set.

- Select **Database menu** → **Standard Measures Report**.
- When prompted to select what the report is based on, select **Entire transcript** and click **OK**.
- Notice that only those measures which are at least 1.5 SD from the database mean are highlighted and followed by one asterisk; measures at least 3 SD are followed by two asterisks. The actual values are not affected.
- Note the bottom of the report window displays the SD interval setting.

3. Close All Windows

The screen is getting cluttered so you should close all the windows before continuing with the next section. You could do this by clicking the **X** in the upper right-hand corner of each tabbed window. However there is a faster way to do this:

- Select **Window menu** → **Close All**.

E. Open Max's Transcript

1. Select **File menu** → **Open**.

2. Select the transcript file **Max EXPO.slt** from the "Lesson Samples" folder and then click the **Open** button (or double click "**Max EXPO.slt**"). Max's transcript is displayed on your screen. Max is 11;2 and is in the 5th grade. He is explaining how to play Monopoly.

- *Subordination Index (SI)*. Max’s sample was coded for subordination index (SI), a hand-coded analysis that counts the number of clauses in each utterance. Notice the codes, [SI-0], [SI-1], [SI-2], etc. inserted at the end of the utterances. Refer to the step-by-step exercise titled “Subordination Index” for details.
- *Expository Scoring Scheme (ESS)*. Scroll down to the end of the transcript and notice the plus lines. Max’s sample was scored on a scale of 1 to 5 for each these components of an expository. Refer to the step-by-step exercises titled “Expository Scoring Scheme (ESS)” for details.

F. Compare transcript to the Expository database

1. Select the database comparison set.

- Select **Database menu** → **Select Database Samples and Settings**.

You are presented with the “Select Database Samples” dialogue box used to select the database samples to use for the comparison. The default database is Expository. This database was pre-selected based on the plus line (+ Context: Expo) at the beginning of Max’s sample.

Notice the transcript information at the bottom of the dialogue box:

Max Expo (Child), EXPO: CA = 11;2, Grade 5, Male, 252 NTW, 32 C&I Verbal Utts, Time: 4:02

The transcript filename is “Max Expo”. The target speaker label, taken from the \$ speaker line at the beginning of the transcript, is “Child”. He is male, aged 11;2 and is in the 5th grade. This expository language sample contains 252 NTW (number total words) and 32 C&I Verbal Utts. The transcript duration is 4 minutes and 2 seconds. The target speaker’s age, grade, gender, and sampling context came from the plus lines at the beginning of the transcript. These lines are automatically inserted when you fill in the header information for new transcripts.

- STEP 2: Select age, grade, and/or gender criteria
 - Look at the criteria selections. The **Age match** is set at plus or minus 6 months.
 - Check the **Grade match** to match 5th graders.
 - Click **Find Matched Samples** to keep the age and grade match criteria and you are informed that there are 83 matching database samples, all telling how to play some game or sport.
- STEP 3: Select method used to equate samples by length
 - Keep the default **Same number of total words**.
 - Click **Find Equated Samples** to find the number of database samples equated by number of total words. You are presented with a dialogue box containing six options.
 - Select the first option, **78 samples – 252 words**.
- SETTINGS: Reset the Standard Deviation Interval to 1SD. It is recommended that the standard deviation be set to 1SD when you first look at the database reports. This directs your attention to

areas of relative strength and weakness that you might overlook if the SD is set higher.

- Click **Reset SD Interval** to change the SD from 1.5 to 1.
- Click **OK** to close the “Select Database Samples” dialogue box.

2. View the *Standard Measures Report*.

- Select **Database menu** → **Standard Measures Report**.
- When prompted to select what the report is based on, select **Entire transcript** and click **OK**.
- The comparison data is generated from the matching database samples and, after a short delay, you are presented with the *Standard Measures Report*.
 - **TRANSCRIPT LENGTH**. Max’s sample is somewhat shorter in utterances, words, and time than his database peers. A shorter sample does not necessarily indicate a problem. It would be important to evaluate the quality of Max’s expository to see if he included all the components.
 - **INTELLIGIBILITY**. Max’s sample was 100% intelligible.
 - **MACRO ANALYSIS**. Max’s transcript was coded for Expository Scoring Scheme (ESS). This was done by inserting the ESS template with scores at the bottom of the transcript and evaluating his sample on ten expository components, e.g., preparations, scoring, rules. The “ESS Composite Score”, the total of the ten individual component scores, was significantly lower than his database peers. This indicates that components of his expository were either missing or incomplete.
 - **SYNTAX/MORPHOLOGY**. Max’s mean length of utterance (MLU) is significantly low. He used fewer Verbs/Utterance which is a gross measure of sentence complexity. Recall that the Subordination Index (SI) codes were added to Max’s sample to measure clausal density. All the expository database samples were also coded for SI. The “SI Composite Score” reported in this section is the mean number of clauses per utterance. Both Verbs/Utterance and SI indicate that Max’s utterances were less complex than those in the database samples.
 - **SEMANTICS**. Max used fewer number of total words (NTW) and different words (NDW) in his expository. However, since the comparison is based on the entire transcript, these values are italicized as a warning that they may be significantly affected by the different sample lengths. The moving-average NDW, however, is significantly lower than the database samples indicating reduced vocabulary diversity. For more information on the moving-average NDW, refer to the built-in help screen ( or F1).
 - **VERBAL FACILITY**. Max’s speaking rate in words per minute was slower than his peers. His sample contained significant pause time. 32.7% of his words were in mazes (*repetitions, revisions, filled pauses*) compared to the database mean of 10.45. He abandoned a significant number of utterances.
 - **ERRORS**. Max’s sample contained a typical number of errors.

3. View the *Performance Report*.

- Select **Database menu** → **Performance Report**.

You are prompted with the “Performance Report Settings” dialogue box. The speaker’s first name, **Max**, is taken from the “+ Name” entry near the beginning of the transcript. Similarly, the speaker’s gender, **Male**, is taken from the “+ Gender” entry in the transcript.

- Press **OK** and the *Performance Report* is displayed.
- Read through the report looking for areas of strengths and weaknesses.
 - Macro Analysis: Max’s sample was coded for Expository Scoring Scheme (ESS), evaluating his sample on ten expository components, e.g., preparations, scoring, rules. Max’s expository was deficient in all ten components.
 - Syntax/Morphology: Max’s mean length of utterance (MLU) was low. His transcript was coded for Subordination Index (SI). This was done by inserting [SI-0], [SI-1], [SI-2], ... codes at the end of all qualifying utterances to measure clausal density. His SI score was low compared to the database samples.
 - Verbal Facility: Max had a slow speaking rate due, at least in part, to frequent and lengthy pauses. He also produced a high number of mazes.

Recall that this report may be edited, copied, and pasted into your diagnostic reports, and saved as an RTF file which can be opened in Microsoft® Word and other word processors.

4. View the *Expository Structure* report.

- Max’s transcript was also coded for Expository Scoring Scheme (ESS). To generate the report comparing Max’s performance to the database comparison set, select **Database menu** → **Expository Scoring Scheme**.
- When prompted to select what the report is based on, select **Entire transcript** and click **OK**.

Notice that, in all ten categories, Max’s expository structure score was significantly lower than his database peers.

5. View the *Subordination Index* report from the Syntax/Morphology section.

- Max’s transcript was coded for Subordination Index (SI). To generate the report comparing Max’s performance to the database comparison set, select **Database menu** → **Subordination Index**.
- When prompted to select what the report is based on, select **Equated by length** and click **OK**.

Notice that none of Max’s utterances contained more than two clauses.

6. View the *Semantic Summary*.

- Select **Database menu** → **Semantics Summary**.
- When prompted to select what the report is based on, select **Equated by length** and click **OK**.

This report lists several word lists. Max used slightly more conjunctions and personal pronouns than the database samples but fewer different types of conjunctions and personal pronouns. This is not surprising given that his number of different words (NDW) was low.

7. View the *Verbal Facility Summary*.

- Select **Database menu** → **Verbal Facility Summary**.
- When prompted to select what the report is based on, select **Equated by length** and click **OK**.

Notice the high number of pauses within and between utterances as well as the large number of phrase-level revisions and word repetitions.

G. Generate a Database Explore Words & Codes report.

Recall from the *Semantics Summary* report that Max used fewer different conjunctions than the database samples. This section looks for the conjunctions Max's used.

1. Select **Database menu** → **Explore Words & Codes...**
2. When prompted to select what the explore list is based on, select **Equated by length** and click **OK**.

You are presented with the Database Explore Words and Codes dialogue box. Here you may enter your own list of vocabulary words for comparison to the database. To get a list of the conjunctions Max used, you could select the "Standard Words Lists" option in the Analyze menu. However, if you wanted to see which conjunctions he used compared to those used by the database comparison set, you would enter the list here.

3. Notice that the settings determine where to look for these conjunctions. Change the utterance base to "**Total utterances**", and keep the search area as "**Main body**" and the type of analysis (*right-hand side of dialogue box*) as "**Count number of occurrences**".
4. Type in the list of conjunctions, one per line. They may be entered in either upper or lower case as case is ignored. Type

AFTER
AND
AS
BECAUSE
BUT
IF
OR
SINCE

SO
THEN
UNTIL
WHILE

- Press **OK** to view the report. There is a delay while the database samples are scanned for production of these conjunctions.

When the report is displayed, notice that Max used the conjunctions “AND”, “IF”, “SO”, and “THEN”. The only conjunction he did not produce, that was used significantly more times by his database peers, is the conjunction “OR”. The database mean indicates that “OR” was found an average of 2.9 times across the 78 language samples selected from the database. The database range of 0 - 8 indicates that this word was not found in at least one of the database samples and it was found 8 times in at least one other sample. Suppose you want to know how many of the 78 database samples used the word “OR”.



- When prompted to select what the explore list is based on, select **Equated by length** and click **OK**.
- Change the “Type of Analysis” setting (*right-hand side of dialogue box*) to **Presence (X) or Absence (O)** and press **OK** to view the report.

This report focuses on whether or not the conjunctions were used. It does not report the number of times they were used. An “X” indicates that the word was used in Max’s sample and an “O” indicates that it was not used. The only database statistic displayed is the percent of the transcripts that used each word. Notice that the conjunction “OR” was used by 90% of the database samples. What is the only conjunction used in all 78 database samples? Did Max use this conjunction?

H. Close All Windows.

- Select **Window menu** → **Close All**.

