TECHNICAL REPORT #16:

Technical Features of Beginning Writing Measures

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Technical Features of Beginning Writing Measures

The purpose of the two studies reported in this paper was to examine technical features of CBM-W indices for 1st-graders. Specifically, we (a) examined a subset of measures that appeared promising based on the work of researchers who have begun to develop beginning writing measures (e.g., Lembke et al., 2003), (b) developed new measures in collaboration with early elementary teachers, and (c) extended existing measures that have shown promise for upper-elementary students (e.g., McMaster & Campbell, 2007) downward to early elementary students. Research questions are listed below:

Study 1

1. Which measures (in terms of writing task, time, and scoring procedure) have sufficient alternate-form reliability?
2. Which measures (in terms of writing task, time, and scoring procedure) have sufficient test-retest reliability?
3. Which measures (in terms of writing task, time, and scoring procedure) have sufficient criterion validity for assessing student writing performance?
4. Which measures show growth over time?

Study 2

1. Which measures (in terms of writing task, time, and scoring procedure) have sufficient alternate-form reliability?
2. Which measures (in terms of writing task, time, and scoring procedure) have sufficient criterion validity for assessing student writing performance?
3. Which measures show growth over time?

Method

Setting and Participants

This study took place in an elementary school serving kindergartners through fourth-graders in a large Midwestern metropolitan school district. The school served approximately 608 students. Forty-three percent of these students were from culturally or linguistically diverse backgrounds, 19% received free or reduced lunch, 6% received special education services, and 7% received English Language Learner (ELL) services. Participants were students in four first-grade combined classrooms. Informed written parental consent and student assent were obtained from 100 students to participate in the study. Twenty-six were in Classroom 1, 24 in Classroom 2, 23 in Classroom 3, and 27 in Classroom 4.

Curriculum-Based Measures

Study 1

Study 1 included three tasks: Word Copying, Sentence Copying, and Story Prompt. Each task had two alternate forms, and each form was administered twice (for test-retest reliability). Participants completed the two forms of the three tasks in 12 separate sessions across two weeks. In each session, participants completed one form of two separate tasks.

Word copying. Word Copying was modeled after the word copying task developed by Lembke et al. (2003). The two forms consisted of packets of four pages (see Figure 1). On the first page, two words were listed in the first row as examples for students to practice. Below the sample words, 12 words were printed in two columns. On each of the remaining three pages, 14 words were printed in two columns and 7 rows. Under each word were lines on which the students were to copy the word. The lines on which students wrote were similar to lines used on writing paper in the first grade curriculum (i.e., two solid lines, 0.16 mm apart, separated with a dashed line to provide a guide for the position of the letters to be written). Words were drawn

from the Houghton Mifflin (Houghton Mifflin, 2005) curriculum that was used in first grade classrooms in the district in which the study was conducted. The curriculum includes high frequency words that students are to master by the end of first grade. For both probes, words were selected randomly from the entire list.

Participants were instructed to practice copying two sample words (e.g., "cat" and "dog") listed at the top of the first page. Afterwards, the participants were told to copy the words from left to right across the page. After 3 min, the examiner instructed participants to stop and raise their pencils in the air so that the examiner could confirm that all students did indeed stop writing. They were then instructed to circle the last letter they copied. Students were then told to continue writing, and were stopped again after 5 min. Complete instructions for Word Copying are provided in Appendix A.

Sentence copying. Sentence Copying was modeled after the sentence copying task developed by Lembke et al. (2003). The two forms consisted of packets of five pages, with three sentences on each page (see Figure 2). On the first page, one example sentence was included for practice. Under each sentence were two sets of lines (again modeled after writing paper used in the first grade curriculum) on which the students were to copy the sentence. Sentences to be copied were drawn directly from the Houghton Mifflin (2005) curriculum and included simple statements such as "We have four hats." and simple questions such as "What can I do?" The curriculum includes lists of sentences that students are to read and write. For both probes, sentences were selected randomly from the entire curriculum.

Participants were instructed to practice copying the example sentence listed at the top of the first page (e.g., "We have one cat."). Then, participants were told to copy the remaining sentences. The examiner instructed participants to stop after 3 min, raise their pencils in the air

(again, to confirm that everyone had stopped) and circle the last letter they copied. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instructions for Sentence Copying are provided in Appendix B.

Story prompts. In addition to the copying tasks, each student responded to two alternate forms of a story prompt. These prompts were developed for use in a previous writing study with older students (McMaster & Campbell, 2007). The prompts were intended to reflect experiences that any student attending a U.S. public school would likely be able to relate to. They were also intended to have relatively simple vocabulary and sentence structure, and to be appropriate for students representing a wide range of ages and skill levels, as well as ELLs, students who are deaf or hard of hearing, and students with other language difficulties. Prompt 1 read, "On my way home from school, a very exciting thing happened…". Prompt 2 read, "One day, we were playing outside the school and…". See Figure 3 for an example.

Each prompt was printed at the top of a sheet of paper, followed by lines printed on the same sheet. The lines on which students wrote were similar to lines used on writing paper in the first grade curriculum (i.e., two solid lines, 0.16 mm apart, separated with a dashed line to provide a guide for the position of the letters to be written). Students were given extra sheets of lined paper in case their writing took up more than one page. The examiner provided participants with 30 seconds to think about what they would write, then instructed them to write as much as they could in response to the prompt in 5 min. The students were told to stop after 3 min, raise their pencils in the air, then circle the last letter they had written. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instructions for Story Prompts are provided in Appendix C.

Study 2

Study 2 included four tasks: Letter Prompt, Picture-Word Prompt, Picture-Theme Prompt, and Photo Prompt. Participants completed three forms of the four tasks in 12 separate sessions across two weeks. In each session, participants completed one form each of four separate tasks.

Letter prompts. Letter Prompts had three alternate forms with the same difficulty level. Each form was used once. Each form contained four pages with 54 letters total (see Figure 4**)**. The letters were randomly selected from all letters in the alphabet except q, x, y, and z which were considered not frequently used by first-graders (however, these letters were used as sample items). Under each letter were lines on which the students were to write words beginning with that letter. The lines were similar to lines used on writing paper in the first grade curriculum (i.e., two solid lines, 0.16 mm apart, separated with a dashed line to provide a guide for the position of the letters to be written). At the top of the first page, one letter was printed for participants to practice with the examiner. The student was instructed to use the letters provided to write words. For example, under the practice letter "y," participants were instructed to write a word starting with "y", such as "yes."

After providing students with practice using the sample letters, the examiner instructed the students to write as many words as they could that started with the letters provided. After 3 min, the examiner instructed participants to stop and raise their pencils in the air. When all students had stopped, the examiner instructed students to circle the last letter they had written. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instruction for Letter Prompts are provided in Appendix D.

Picture-word prompts. Picture-Word Prompts were word prompts with a picture above each word (see Figure 5). Participants were instructed to write a sentence using the word

provided. The examiner read each word aloud to the students before they completed the prompt. The pictures served as a reminder of the word to control for reading difficulties.

The Picture-Word Prompts had three alternate forms with the same difficulty level. Each form contained 15 words and relevant pictures on five pages. The 45 words were chosen from the high-frequency word bank from the Houghton-Mifflin (2005) curriculum. The words and pictures were printed on the left of the page with two rows of lines printed beside them. Each form was used once at different times. Before the task, the examiner drew a picture (e.g., a tree, sun, or sock) on the blackboard and wrote the name of the object underneath. Afterwards, the examiner asked the participants to generate sentences with the word and picture. The examiner wrote the sentence examples on the board. For example, the word "tree" could elicit the sentence "I saw a tree." After providing students with practice using the samples generated, the examiner instructed the students to write as many sentences as they could that started with the words/pictures provided. After 3 min, the examiner instructed participants to stop and raise their pencils in the air. When all students had stopped, the examiner instructed students to circle the last letter they had written. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instruction for Picture-Word Prompts are provided in Appendix E.

Picture-theme prompts. Picture-Theme Prompts included three prompts with the following themes: birthday party, snow, and school. Each theme contained four pictures with one related word underneath each picture (see Figure 6). For example, the "birthday party" theme had the pictures of cake, friends, home, and birthday balloon with the four words: cake, friends, home, and birthday printed underneath each picture.

Each theme prompt was printed at the top of the first page with lines printed below the prompt. Additional lined sheets were provided in case they were needed. Each theme was used

once at three different times on the same participants. Before the task, the examiner first instructed the participants to identify the four pictures provided, then asked the participants to write a story based on the theme. After 3 min, the examiner instructed participants to stop and raise their pencils in the air. When all students had stopped, the examiner instructed students to circle the last letter they had written. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instruction for Picture-Word Prompts are provided in Appendix F.

Photo prompts. Each student responded to three alternate forms of a Photo Prompt, two of which were developed for use in a previous writing study with older students (McMaster & Campbell, 2007) and a third developed for this study (see Figure 7). The prompts were intended to reflect experiences that any student attending a U.S. public school would likely be able to relate to. Prompt 1 consisted of a picture of students boarding a bus outside of a school. Prompt 2 was a picture of students playing ball outside of a school. Prompt 3 was a picture of kids playing on a playground in the wintertime**.** Each prompt was printed in color on a separate sheet of paper.

Students were provided with lined sheets of paper (as described for the Story Prompt in Study 1). The examiner provided participants with 30 seconds to think about what they would write, then instructed them to write as much as they could in response to the prompt in 5 min. The students were told to stop after 3 min, raise their pencils in the air, then circle the last letter they had written. Students were then instructed to continue writing, and were stopped again after 5 min. Complete instructions for Photo Prompts are provided in Appendix G.

Scoring Procedures

For both Studies 1 and 2, each writing sample was scored using several procedures selected based on those that have shown promise in previous progress monitoring studies focusing on written expression primarily for older students. The following elements of the students' passages were recorded (detailed scoring instructions are provided in Appendix H):

Words written (WW): The total number of words written.

Words spelled correctly (WSC): Words that are spelled correctly as a computer word score them (i.e., syntax and semantics were not taken into account).

Correct word sequences (CWS; Videen, Deno, & Marston, 1982): Any two adjacent, correctly spelled words that are acceptable within the context of the sample to a native speaker of the English language (meaning that a native speaker would judge the word sequences as syntactically and semantically correct).

Correct minus incorrect word sequences (CIWS; Espin, Scierka, Skare, & Halverson, 1999): The number of correct word sequences minus the number of incorrect word sequences. (Note: this procedure was not applied to the Word Copying or Letter-Word Prompts.)

Correct letter sequences (CLS; Deno et al., 1980). Any two adjacent letters that are correct according to the spelling of the word. (Note: this procedure was not applied to the Word Copying or Letter-Word Prompts.)

Correct minus incorrect letter sequences (CILS). The number of correct letter sequences minus the number of incorrect letter sequences.

Criterion Variables

Classroom Writing Performance

Two measures were used to assess students' writing performance in the classroom. First, teachers were asked to rate each student's writing skills on a 4 point Likert-type scale (1 = lower

performing, 4 = higher performing). The teachers were encouraged to use the full range of ratings to describe their students. Second, students' grades in writing were obtained from district records. Grades were obtained for the 2nd, 3rd, and 4th grading quarters, as these were the closest points in time to the CBM data collection periods. The rubrics teachers used were provided from the school district. The rubrics included seven standards. They were (a) using a process for writing; (b) writing for a variety of purposes; (c) organizing writing appropriately with topics and details; (d) using beginning knowledge of capitalization and punctuation; (e) spelling grade appropriate words correctly; (f) locating and using information; and (g) forming letters correctly. Grades were reported based on a 4-point rubric on each of these seven standards.

Test of Written Language – Third Edition

The Test of Written Language – Third Edition (TOWL-3; Hammill & Larsen, 1996) is a comprehensive test of written language designed for students from 7 years to 17 years 11 months of age. The Spontaneous Writing subtest of the TOWL-3 (Form A) was group-administered to all study participants. Students were presented with a picture depicting a futuristic scene of astronauts, space ships, and construction activity. Students were told to look at the picture and to think of a story about the picture. They were encouraged to plan their story, and then to write as much as they could in 15 min. Student writing samples were scored based on Contextual Conventions (which include capitalization, punctuation, spelling, and other such elements), Contextual Language (which includes quality of vocabulary, sentence construction, and grammar), and Story Construction (which includes quality of plot, prose, character development, interest, and other compositional elements). Alternate-form reliabilities for the Spontaneous Writing subtests for **7**-year-olds range from r = .60 to .87. The average validity correlation

between Spontaneous Writing and the Writing Scale of the *Comprehensive Scales of Student Abilities* (Hammill & Hresko, 1994) is reported as .50.

Procedures

Prompt and Materials Development

The measures were developed through a process of generating ideas, searching for materials, conducting pilot tests with first-grade students from other schools, soliciting teachers' suggestions, and modifying prompts. To be consistent with previous CBM research and development, we maintained the principle that the measures to be used should be simple in form and easy to administer and score.

The Word Copying and Picture-Word prompts were developed using high-frequency words from the Houghton Mifflin curriculum (Houghton Mifflin, 2005)**.** Forty-five nouns and adjectives were chosen for the word prompts as these words could clearly be depicted with pictures. Sentences for the Sentence Copying prompts were drawn from sentences used in the Houghton Mifflin curriculum (the sentences accompanied the high-frequency word lists). The Letter Prompts included all letters except q, x, y, and z which were considered not frequently used by first-grade students. The Picture-Theme prompts included three themes: birthday party, snow, and school. The picture-theme prompts were developed based on typical first-graders' life experiences, and also used high-frequency words from the Houghton-Mifflin curriculum. The pictures for both the word prompts and picture-theme prompts were chosen from the Clip Art of Microsoft and researcher-drawn pictures. The Story and Photo prompts were chosen from a pool of writing prompts created for a previous writing study with older students (McMaster & Campbell, 2007).

Winter CBM Administration

The progress monitoring tasks were first administered in February-March of 2006. Two graduate research assistants (GRAs) group-administered the tasks to the first-graders. In Study 1, three tasks were administered in 12 sessions in each of the two classes at the same hour across two weeks (see Table 1). Each task included two forms. Each session contained one form of two different tasks. Each form of each task was administered twice. In Study 2, four tasks were administered in 12 sessions in each of the two classes at the same hour across two weeks (see Table 2). Each task included three forms. Each session contained one form of two different tasks. Each form of each task was administered once.

<Insert Tables 1 and 2 about here>

Spring CBM Administration

The progress monitoring measures were administered again in May of 2006. Two GRAs administered measures to the same first grade participants. To avoid intervening issues such as test fatigue and attention problems anticipated by the teachers (it was the end of the year and limited time was available), each measure was reduced to a single form. Form B of the TOWL-3 was also administered. In Study 1, three measures plus the TOWL-3 were administered in two sessions in each of the two classes at the same hour within one week (in Table 3). In Study 2, four measures plus the TOWL-3 were administered in three sessions in each of the two classes at the same hour within one week (in Table 4).

<Insert Tables 3 and 4 about here>

Scoring and Reliability

Scorers included the first author and four GRAs. GRAs were all doctoral students in special education. The first author and two GRAs, all of whom had completed extensive scoring using most of the above procedures on writing samples of older students, met during five one-

hour sessions. During these sessions, scoring procedures used in previous writing CBM research with older students were tested on the first grade writing samples and revised to better fit the nature of the new tasks and the writing of the younger students.

Following these sessions – each scorer scored one complete set of writing responses (we all scored the same student's writing) and then compared scores. Differences in scoring or questions regarding scoring were discussed and resolved. When a final set of scoring procedures were agreed upon, each scorer then scored an additional writing packet (which included all tasks produced by one student) on their own. The first author then compared each GRA's scores with her own, and calculated the percent of agreement for each scoring procedure, using a point-by-point agreement method. If a GRA scored less than 80% on any scoring procedure, she was asked to meet with the expert for further training, and the interrater agreement procedure was repeated. Once 80% agreement was met for each scoring procedure, the GRA was given additional packets of writing samples to score. In the process of scoring, one GRA graduated and was replaced by two new GRAs who were trained on the final agreed-upon scoring procedures. These scorers underwent the interrater agreement procedures described above.

For the purpose of maintaining 80% agreement, discussions were held repeatedly regarding any unexpected scoring issues during the scoring process. For each GRA, the first author selected randomly one out of every 10 packets to score for reliability, scored them independently, and compared her scores with the GRA's scores. If the agreement for each scoring procedure was not at least 80%, the first author and the GRA met to discuss the discrepancy. If there were only a few discrepancies, the two came to agreement on the correct score and the GRA continued scoring. If there were several discrepancies, the entire packet was

rescored and the GRA had to reach 80% reliability with the expert again in order to continue scoring.

Training and interrater agreement procedures were also conducted to score the TOWL-3 Spontaneous Writing samples. The first author two graduate students in educational psychology who had experience scoring the TOWL-3) met for one hour to review and practice scoring procedures. One of the graduate students (an experienced special education teacher) then scored all of the students' responses. The second graduate student (a school psychology student) randomly selected and scored 10% of the responses. Interrater agreement was calculated on these 10%, using a point-by-point method. The number of agreements was divided by the number of agreements plus disagreements and multiplied by 100 to obtain percent agreement. All discrepancies in scoring were identified and discussed, and items were rescored if necessary. Overall interrater agreement scores were above 90% for all variables for both 3 and 5 min (see Table 5). Detailed information of interrater agreement in each prompt is in Appendix I.

Date entry and analysis. All data were entered into two separate worksheets in a Microsoft Excel database. A Microsoft Excel formula was then used to compare scores entered into the two sheets. Any cells that were not an exact match were flagged, the correct datum was located in the original scoring sheets, and was re-entered into both sheets. This process was repeated until both sheets were identical (indicating that all data had been entered correctly). Data were then analyzed using SPSS 13.0 for Windows.

Specifically, we began by examining distributions of each writing task, scoring procedure, and duration. Measures with relatively normal distributions were examined to determine which had sufficient alternate-form reliability (defined in the Results section) by calculating Pearson *r* correlation coefficients between forms. Those with sufficient reliability

were then examined to determine which had sufficient criterion validity (also defined in the Results) by calculating Pearson *r* or Spearman's Rho coefficients with criterion measures. Measures with sufficient reliability *and* criterion validity were examined to identify whether they reliably detected fall to spring growth. Paired samples *t*-tests were conducted within each grade.

Data analysis involved the following steps. First, descriptive data for both Study 1 and Study 2 in February and May 2006 were computed for each measure, including means, standard deviations (*SD*s), range, skewness and kurtosis for WW, WSC, CWS, CIWS, and CLS on form A, form B, test and retest, as well as for 3 min and 5 min durations. Descriptive data are displayed in Tables 6 through 12. Second, histograms were created to investigate central tendency and outliers for each of the above measures. Third, box plots were used to show students' performance, with each box plot presenting students' performance scores on one measure on Form A, Form B, Test, and Retest together. Histograms and box plots are included in Appendix J. Fourth, descriptive data were computed for the three TOWL-3 subtests and total scores for participants in Studies 1 and 2 separately. These data are presented in Tables 13 and 14. Histograms (see Appendix J) were created to examine score distributions of each TOWL subtest scores and the total scores.

<Insert Table 6 to Table 14 approximately here.>

Fifth, Pearson *r* correlation coefficients were computed to examine test-retest, alternate form, and criterion validity of measures. Data obtained for reliability included correlation coefficients of (a) test-retest and alternate forms for 3 min and 5 min on each dependent variable of each measure in Study 1 in February; and (b) alternate forms for 3 min and 5 min on each dependent variable of each measure in Study 2 in February. Data obtained for criterion validity included correlation coefficients (a) between each measure administered in February and teacher

ratings for 3 min and 5 min separately; (b) between each measure administered in February and the 3rd-quarter school district rubrics; (c) between each measure administered in May and the 3rd-quarter school district rubrics; (d) between each measure administered in May and performance on TOWL-3 subtests.

Sixth, paired-sample *t*-tests were conducted for sentence copy, story prompt, and photo prompt. The paired variables in the analysis were the mean of the first test in February and the mean of the test in May. The purpose was to investigate growth in writing by the same sample of participants from February to May using the same scoring methods.

Seventh, we explored whether outliers had an impact on the reliability of scoring methods. Specifically, we identified outliers on the most promising measures (those with moderate to strong reliability and validity: 5-min sentence copy, story prompt, and photo prompt). Specific methods included (a) obtaining descriptive data of the percent of IW out of WW on test, retest, and alternate forms for later correlation analyses; (b) finding extreme values in the descriptive data of each test; (c) checking distributions on the histograms; (d) looking for outliers on the box plots; (e) obtaining correlation matrices of each measure for test-retest and alternate-form coefficients; and (f) repeating the correlation analyses after deleting 2 to 4 extreme outliers on each measure. The data obtained using these methods provided information about ranking of students on each test on the same scoring methods.

Finally, generalizability theory was used to further investigate the reliability of each dependent variable in each measure. We will report this part of data analysis in a separate report.

Results

Below we report interrater agreement and descriptive data, followed by analyses conducted to answer specific research questions for Studies 1 and 2: (1) Which measures (in

terms of writing task, time, and scoring procedure) have sufficient alternate-form (Studies 1 and 2) and test-retest (Study 1 only) reliability? (2) Which measures (in terms of writing task, time, and scoring procedure) have sufficient criterion validity for assessing student writing performance? (3) Which measures show growth over time?

Interrater Agreement

Interrater agreement was established on 10% of all measures. As shown in Table 5, the average agreement on all variables for 3-min and 5 min durations was above 90%. More detailed information for interrater agreement is in Appendix I.

Descriptive Data

Descriptive data including means, standard deviations (*SD*), skewness, kurtosis, and range are summarized for the seven early writing measures in Tables 6 through 12. Histograms and box plots are provided in Appendix J. In Study 1, scoring variables for Word Copy (Table 6) included written (WW), words spelled correctly (WSC), and correct letter sequences (CLS). Scores were normally distributed. Scoring variables for Sentence Copy and Story Prompt (Tables 7 and 8) included WW, WSC, correct word sequences (CWS), correct minus incorrect word sequences (CIWS), and CLS. Among these five variables, WW, CWS, and CLS were normally distributed. WSC yielded more outliers, especially in the 5-min duration, for Story Prompt (see Figure 8). This phenomenon was also observed for CIWS (see Figure 9); some participants obtained negative scores because they wrote more incorrect than correct words.

In Study 2, scoring variables for Letter Prompt included WW, WSC, and CLS (in Table 9). WW, WSC, and CLS were normally distributed. However, WSC yielded several outliers (see Figure 10). Scoring variables for Picture Word Prompt, Picture Theme Prompt, and Photo Prompt included WW, WSC, CWS, CIWS, and CLS (in Tables 10 to 12). In the Picture Word

Prompt and Picture Theme Prompt, scores of WW, WSC, and CWS for 3 min and 5 min showed normal distribution. For the Photo Prompt, WW and WSC showed normal distribution for both 3 min and 5 min.

Descriptive data for subtests 6, 7, and 8 of the TOWL-3 are provided in Tables 13 and 14. Scores on subtest 6 were negatively skewed. Scores on subtest 7 were normally distributed. Scores on subtest 8 were positively skewed (see Appendix K).

Which Measures have Sufficient Alternate-Form and Test-Retest Reliability?

Pearson-*r* correlation coefficients were calculated to determine test-retest (Study 1) and alternate-form (Studies 1 and 2) reliability, and are reported in Tables 15 and 16. Because there is not a consensus on criteria by which to judge reliability of measures, we report the strength of reliability coefficients in relative terms. For example, we can compare coefficients to those found for other types of CBM and to other types of writing measures. In reading, reliability coefficients have generally been reported as $r > .85$ (Wayman et al., 2007). For standardized writing measures, reliability estimates have ranged from .70 to above .90 (Taylor, 2003). With this information in mind, we consider reliability coefficients of $r > .80$ to be strong, $r = .70$ to .80 moderately strong, $r = .60$ to .70 moderate, and $r < .60$ weak. Based on these criteria, we determined which measures had sufficient (moderately strong) alternate-form reliability.

In Study 1, measures that appeared to consistently have sufficient test-retest and alternate-form reliability included virtually all scoring procedures for 3- and 5-min Sentence Copy ($r = .70$ to .89). Reliability coefficients appeared to be somewhat stronger for 5 min sentence copy (although significance tests were not conducted to confirm this). In addition, test-retest and alternate form reliability coefficients for 5-min Word Copy variables were moderate to

moderately strong (r = .66 to .89) as were coefficients for 5-min Story Prompt variables (r = .62 to .84) with the exception of test-retest reliability of CIWS on Form A (r = .45).

In Study 2, alternate form reliability coefficients were generally weak to moderate. Forms B and C of the Letter Prompt yielded moderately strong coefficients on CLS written in 3 min (r = .70) and WW, WSC, and CLS written in 5 min (r = .74 to .81). Forms B and C of the Picture Word prompt yielded moderately strong coefficients for 3-min WW, WSC, CWS, and CLS (r = .72 to .79) and for 5-min WW, WSC, and CLS (r = .72 to .79). For the Photo Prompt, Forms A and B yielded moderately strong coefficients for WW, WSC, CWS, and CLS written in both 3 and 5 min (r = .73 to .85); Forms A and C yielded moderately strong coefficients for WW, WSC, CWS, and CLS written in 5 min (r = .73 to .79); and Forms B & C yielded moderately strong coefficients for WSC, CWS, and CLS written in 3 min (r = .70 to .78).

Which Measures have Sufficient Criterion Validity?

For concurrent validity, Pearson-r correlation coefficients were calculated between participants' performance on each measure and each of the following criterion measures: (a) teacher ratings on a 4-point scale, (b) school district rubrics, and (c) TOWL-3 subtests and total scores. Again, correlations of r > .80 were considered strong, r = .70 to .80 moderately strong, and r = .60 to .70 moderate. Given that writing measures have historically yielded modest criterion validity coefficients (Taylor, 2003), and because we wished to be as inclusive as possible in identifying promising measures, we also considered correlations above .50 to be sufficient for inclusion in further analyses. Below we report findings specific to those measures that yielded sufficiently *reliable* scores (from the above analyses).

Teacher ratings. Correlations between student performance and teacher ratings were calculated for each of the four classroom teachers separately (see Table 17). In Study 1,

measures that yielded sufficient reliability coefficients *and* validity coefficients across both teachers included CWS produced on the 3- and 5-min Sentence Copy measure (r = . 51 to .64); and WSC and CWS on the 5-min Story Prompt (r = .50 to .70). In Study 2, measures that yielded sufficient reliability coefficients *and* validity coefficients across both teachers included CWS produced on the 3-min Picture Word prompt (r= .49 to .72); and CWS produced on the 3- and 5-min Photo Prompt (r = .51 to .69).

District rubric. The school district rubric included seven categories for each school-year quarter. Rating scores for each category in the 3rd quarter (in February) were correlated with the scores on each measure administered in February. Rating scores for the 4th quarter (in May) were correlated in the same way with the scores on each measure administered in May (in Tables 18 and 19). In Study 1, measures that appeared to have sufficient test-retest and/or alternate form reliability *and* criterion validity included the following: for Sentence Copy, virtually all scoring procedures applied to most forms administered in 3 and 5 min (r = .52 to .70), with the exception of scores obtained on the 3-min Form B and Form A-retest (r = .42 to .49); and for Story Prompt, virtually all scoring procedures applied to all forms administered in 5 min (r = .56 to .75) with the exception of CIWS (r = .31 to .49). In Study 2, criterion validity coefficients were much less consistent across the different forms and scoring procedures applied to each measure, with few coefficients great than r = .50.

TOWL-3. Scores on WW, WSC, CWS, CIWS, and CLS for 3 and 5 min in each prompt were correlated separately with scores on each of the three TOWL-3 subtests and with the total score of the three TOWL subtests. In Study 1, validity coefficients were generally weak. WW, WSC, and CWS obtained from the 5-min story prompt correlated moderately with Subtest 7 (r = .55 to .59) as did WSC and CWS with the Total Score (r = .50 to .51). In Study 2, only WW for

3 min in Photo Prompt with Subtest 7, CWS and CLS for 3 min in Picture Theme Prompt with Subtest 8 were significant at the .05 level. All other coefficients were nonsignificant (all *p*s > .05).

Which Measures Show Growth Over Time?

Those measures that were determined to have sufficient reliability and criterion validity were examined to determine whether they were sensitive to student growth over time (from February to May). In Study 1, multiple scoring procedures were sufficiently reliable and valid for both the 3- and 5-min Sentence Copy probes (WW, WSC, CWS, CIWS, and CLS) and the 5 min Story Prompt (WW, WSC, CWS, CLS).

In Study 2, CWS produced on the 3 min Picture Word prompt, 3-min Photo Prompt, and 5-min Photo Prompt were sufficiently reliable and valid. Because only one scoring procedure met the "sufficient" criteria for each task, each measure was submitted to a paired-samples *t*-test.

Results of paired-samples *t*-tests on sentence copy, story prompt, picture-word prompt, and photo prompt between the first test in February and the test in May show significant differences on all scoring variables except CIWS on the 3-min picture-word prompt (see Table 22). A summary of mean differences on the above measures is in Table 23. Graphs of mean differences on these measures are in Figure 11.

References

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Table 1

Schedule of prompts administration for Study 1 in February 2006

Week	Date	Word Copying	Sentence Copying	Story Prompt
1	Feb. 6	A	A	
1	Feb. 8	B		A
1	Feb. 10		B	B
2	Feb. 13	A	A	
2	Feb. 15	B		A
2	Feb. 17		B	B

Table 2

Schedule of prompts administration for Study 2 in February-March 2006

Week	Date	Letter Prompt	Picture-Theme Prompt	Picture-word Prompt	Photo Prompt
1	Feb. 21	A	A		
1	Feb. 23			A	A
1	Feb. 24	B			B
2	Feb.27		B	B	
2	Mar. 1	C	C		
2	Mar. 2			C	C

Table 3

Schedule of prompts administration for Study 1 in May 2006

Weekday	Date	Word Copying	Story Prompt	Sentence Copying	TOWL
Tuesday	May 23	X			X
Thursday	May 25		X	X	

Table 4

Schedule of prompts administration for study 2 in May 2006

Weekday	Date	Picture-Theme Prompt	Letter Prompt	TOWL	Photo Prompt	Picture-Word Prompt
Monday	May 22			X		
Wed	May 24	X	X			
Friday	May 26				X	X

Table 5

Interrater Agreement

		WW	WSC	CWS	C-IWS	CLS
3 min	Average	99.93	99.47	97.97	91.24	99.43
	Range	95-100	80-100	33-100	0-100	86-100
5 min	Average	99.87	99.46	98.52	93.08	99.59
	Range	91-100	67-100	50-100	0-100	86-100

Table 6

Descriptive Data for Word Copy in Study 1

	February						May					
	Mean	*SD*	Skewness	Kurtosis	Min	Max	Mean	*SD*	Skewness	Kurtosis	Min	Max
WW-3 min-A	14.8	5.44	0.31	0.29	3	30	25.04	8.15	.58	.12	12	48
WW-3 min-B	20.88	6.6	0	-0.83	8	33						
WW-3 min-A-Retest	20.46	7.09	0.48	0.45	5	40						
WW-3 min-B Retest	23.24	7.88	-0.29	-0.25	3	40						
WW-5 min-A	24.38	8.52	0.23	0.74	7	51	41.37	15.55	.94	1.08	16	89
WW-5 min-B	33.64	10.35	0.02	-0.45	13	54						
WW-5 min-A-Retest	31.8	10.57	0.45	0.40	11	60						
WW-5 min-B-Retest	36.02	11.63	-0.33	0.41	5	64						
WSC-3 min-A	13.14	5.4	0.61	0.95	2	30	22.8	7.83	.85	1.17	11	48
WSC-3 min-B	19.16	6.07	-0.03	-0.4	5	31						
WSC-3 min-A-Retest	18.12	6.6	0.27	0.39	2	36						
WSC-3 min-B-Retest	21.22	7.5	-0.07	-0.1	3	40						
WSC-5 min-A	21.56	8.44	0.59	1.90	4	51	37.65	14.68	1.07	1.92	14	88

WSC-5 min-B	30.6	9.57	0	-0.03	9	53						
WSC-5 min-A-Retest	28.02	10.57	0.47	0.93	4	60						
WSC-5 min-B-Retest	32.52	11.46	-0.07	0.44	4	64						
CLS-3 min-A	74.66	30.91	0.59	0.57	12	169	131.9	47.52	.71	.52	56	273
CLS-3 min-B	101.4	34.82	0.14	-0.22	29	190						
CLS-3 min-A-Retest	104.64	37.89	0.16	0.30	205	15						
CLS-3 min-B-Retest	110.72	38.7	-0.06	0.25	12	210						
CLS-5 min-A	125.4	48.86	0.54	1.11	33	287	221.61	81.4	.77	.94	80	474
CLS-5 min-B	168.74	55.57	0.11	-0.3	58	292						
CLS-5 min-A-Retest	168.14	60.12	0.39	0.36	45	337						
CLS-5 min-B-Retest	180.6	65.26	0	0.47	15	356						

Table 7

Descriptive Data for Sentence Copy in Study 1

	February						May					
	Mean	*SD*	Skewnes s	Kurtosi s	Min	Max	Mean	*SD*	Skewness	Kurtosis	Min	Max
WW-3 min-A	19.17	7.63	0.16	0.37	4	42	27.10	12.01	.53	.59	4	61
WW-3 min-B	20.47	7.73	0.50	0.66	5	44						
WW-3 min-A-Retest	21.60	8.32	-0.22	0.3	1	43						
WW-3 min-B- Retest	24.36	9.29	0.3	-0.09	7	49						
WW-5 min-A	29.86	13.31	0.55	0.88	3	70	45.80	20.34	.76	.13	11	99
WW-5 min-B	33.38	12.95	0.85	2.09	9	78						
WW-5 min-A- Retest	34.54	13.23	0.3	0.80	2	74						
WW-5 min-B- Retest	38.02	16.56	0.63	0.82	8	88						
WSC-3 min-A	16.47	7.35	0.11	0.07	2	37	24.90	11.34	.36	-.03	4	50
WSC-3 min-B	17.89	6.72	0.002	0.03	3	35						
WSC-3 min-A-Retest	19.13	7.29	-0.47	-0.12	1	33						
WSC-3 min-B-Retest	21.38	8.09	0.03	-0.69	6	38						
WSC-5 min-A	26.34	12.39	0.4	0.45	2	63	42.20	18.79	.65	-.13	11	86
WSC-5 min-B	29.46	10.95	0.053\	0	7	59						

WSC-5 min-A-Retest	30.88	11.29	-0.09	0.11	2	56						
WSC-5 min-B-Retest	33.18	13.82	0.25	-0.01	7	69						
CWS-3 min-A	16.70	7.73	.029	-.73	2	32	27.00	12.96	.293	-.245	4	57
CWS-3 min-B	18.62	6.97	.07	.80	3	39						
CWS-3 min-A-Retest	19.13	7.29	-.16	-.47	1	33						
CWS-3 min-B-Retest	21.38	8.09	-.127	-.88	6	38						
CWS-5 min-A	26.86	13.27	0.3	0.19	2	64	45.30	20.68	.610	-.17	11	96
CWS-5 min-B	30.40	11.99	0.17	0.19	6	65						
CWS-5 min-A-Retest	31.84	12.67	0.04	0.08	2	59						
CWS-5 min-B-Retest	34.70	14.46	0.23	-0.23	8	70						
C-IWS-3 min-A	9.94	10.26	-0.6	0.88	23	26	21.30	13.53	.37	-.35	-2	54
C-IWS-3 min-B	12.77	11.08	-2.09	8.3	37	34						
C-IWS-3 min-A-Retest	12.70	11.69	-1.34	4.84	35	31						
C-IWS-3 min-B-Retest	14.85	11.69	-2.62	12.48	43	34						

C-IWS-5 min-A	17.70	15.63	-0.9	2.16	39	44	35.60	19.95	.67	-.02	9	88
C-IWS-5 min-B	21.08	19.07	-2.62	11.327	-73	48						
C-IWS-5 min-A-Retest	21.70	18.26	-2.05	8.78	-64	52						
C-IWS-5 min-B-Retest	23.66	20.85	-2.9	15.026	-86	54						
CLS-3 min-A	71.77	30.01	0.31	0.38	11	158	108.00	52.07	.62	.19	17	241
CLS-3 min-B	81.51	29.65	0.2	0.06	18	153						
CLS-3 min-A- Retest	83.79	31.93	-0.37	-0.36	5	140						
CLS-3 min-B- Retest	95.57	35.72	0.05	-0.55	26	175						
CLS-5 min-A	118.40	55.47	0.54	0.95	14	290	185.00	81.67	.67	.38	41	406
CLS-5 min-B	133.84	49.45	0.183	0.17	35	274						
CLS-5 min-A-Retest	139.92	52.13	-0.14	-0.2	11	247						
CLS-5 min-B-Retest	153.10	63.52	0.26	-0.15	31	317						

Table 8.

Descriptive Data for Story Prompt in Study 1

	February						May					
	Mean	*SD*	Skewness	Kurtosis	Min	Max	Mean	*SD*	Skewness	Kurtosis	Min	Max
WW-3 min-A-Pre	13.14	5.58	1.18	2.78	1	26	21.80	12.97	1.01	1.01	2	59
WW-3 min-B-Pre	14.55	6.21	-0.03	-0.4	1	28						
WW-3 min-A- Retest	15.55	7.75	0.26	-0.2	1	37						
WW-3 min-B- Retest	18.30	8.45	0.17	-0.74	3	38						
WW-5 min-A-Pre	21.85	9.18	0.78	1.12	5	41	36.98	20.93	1	.705	6	99
WW-5 min-B-Pre	24.70	11.76	-0.08	-0.28	0	51						
WW-5 min-A- Retest	25.15	11.85	0.42	0.08	3	59						
WW-5 min-B- Retest	29.23	13.63	0.19	-0.4	3	63						
WSC-3 min-A-Pre	9.34	4.31	0.43	-0.4	1	18	17.22	11.44	1.37	2.14	1	54
WSC-3 min-B-Pre	10.32	5.58	0.56	-0.33	1	23						
WSC-3 min-A- Retest	10.93	6.28	0.73	0.37	1	29						
WSC-3 min-B- Retest	13.43	6.99	0.65	0.01	2	29						
WSC-5 min-A-Pre	15.23	7.41	0.67	-0.03	3	32	28.96	18.21	1.274	1.75	5	87
WSC-5 min-B-Pre	17.77	10.14	0.83	-0.53	0	41						
WSC-5 min-A- Retest	17.38	9.41	0.68	0.16	3	44						

WSC-5 min-B- Retest	21.45	11.58	0.62	0.15	3	51						
CWS-3 min-A-Pre	6.55	3.89	1.09	1.56	1	18	12.33	10.30	1.52	2.1	1	47
CWS-3 min-B-Pre	7.59	5.63	.83	-.53	1	20						
CWS-3 min-A- Retest	7.64	6.20	1.31	1.84	0	28						
CWS-3 min-B- Retest	9.89	6.49	.75	-.03	1	25						
CWS-5 min-A-Pre	10.57	7.21	1.46	2.67	1	35	20.98	16.37	1.43	1.93	3	75
CWS-5 min-B-Pre	12.85	9.71	0.81	-0.05	1	40						
CWS-5 min-A- Retest	11.87	8.76	1.22	2.2	0	43						
CWS-5 min-B- Retest	15.91	10.59	0.93	0.61	2	45						
C-IWS-3 min-A-Pre	-0.93	5.84	0.63	0.92	-13	16	1.02	10.29	.91	1.07	-19	30
C-IWS-3 min-B-Pre	-0.43	7.72	0.19	-0.47	-17	16						
C-IWS-3 min-A- Retest	-1.25	7.71	0.75	0.83	-14	21						
C-IWS-3 min-B- Retest	0.11	7.73	-0.25	0.4	-21	15						
C-IWS-5 min-A-Pre	-2.60	9.86	-1.05	6.63	-19	31	1.20	16.77	.48	.34	-36	44
C-IWS-5 min-B-Pre	-1.23	11.80	-0.15	-0.42	-26	21						
C-IWS-5 min-A- Retest	-3.47	9.72	0.27	-0.01	-22	18						
C-IWS-5 min-B- Retest	0.23	11.21	-0.52	2.77	-24	31						
CLS-3 min-A-Pre	47.5	21.9	0.48	-0.33	3	99	79.80	53.33	1.363	2.3	3	246
CLS-3 min-B-Pre	50.43	25.1	0.25	-0.37	2	112						

CLS-3 min-A- Retest	57.64	30.79	0.59	0.31	5	151						
CLS-3 min-B- Retest	65.7	34.14	0.74	0.52	16	170						
CLS-5 min-A-Pre	80.36	37.82	0.56	0.01	13	168	136.8	87.13	1.363	2.27	20	414
CLS-5 min-B-Pre	88.4	45.74	0.18	-0.05	1	204						
CLS-5 min-A- Retest	92.6	50.37	0.72	0.34	13	257						
CLS-5 min-B- Retest	104.6	55.79	0.74	0.76	13	273						

Table 9

Descriptive Data for Letter Prompt in Study 2

	February						May						
	Mean	SD	Skewness	Kurtosis	Min	Max		Mean	SD	Skewness	Kurtosis	Min	Max
WW-3 min-A	12.56	4.71	.21	-.57	4.	23.	WW-3 min	16.96	7.53	.65	.41	3	37
WW-3 min-B	14.06	5.97	.06	-.34	2.	24.							
WW-3 min-C	17.22	8.31	.7	.13	4.	39.							
WW-5 min-A	20.18	7.08	.1	.42	5	40	WW-5 min	27.39	12.67	1.12	2.06	6	68
WW-5 min-B	24.76	9.91	-.02	-.45	5	44							
WW-5 min-C	28.36	14.35	.39	-.42	3	59							
WSC-3 min-A	8.81	4.10	.29	-.94	2	16	WSC-3 min	12.86	6.68	1.149	2.79	2	37
WSC-3 min-B	10.17	5.41	.45	-.15	2	24							
WSC-3 min-C	12.69	7.78	1.48	3.49	0	39							
WSC-5 min-A	14.04	6.41	.3	-.14	1	29	WSC-5 min	20.05	11.5	1.94	5.82	4	67
WSC-5 min-B	17.78	8.75	.25	-.37	4	39							
WSC-5 min-C	20.51	12.86	1.18	1.65	1	59							
CLS-3 min-A	47.89	21.9	.73	.48	14	109	CLS-3 min	70	35.72	1.11	2.02	16	190
CLS-3 min-B	54.64	27.84	.66	.36	5	123							
CLS-3 min-C	70.86	36.45	.98	.93	17	173							

CLS-5 min-A	79.24	32.34	.72	1.85	21	189	CLS-5 min	113.82	58.62	1.73	4.5	26	339
CLS-5 min-B	96.20	45.65	.54	.6	15	210							
CLS-5 min-C	113.64	60.92	.62	.08	11	265							

Table 10

Descriptive Data for Picture-Word Prompt in Study 2

	February							May					
	Mean	*SD*	Skewness	Kurtosis	Min	Max		Mean	*SD*	Skewness	Kurtosis	Min	Max
WW-3 min-A	16.26	50.68	0	-.12	2	34	WW-3 min	23.74	11.19	.12	-.42	0	50
WW-3 min-B	21.62	8.08	.12	-.84	6	37							
WW-3 min-C	21.86	9.82	.28	-.35	5	46							
WW-5 min-A	27.89	11.81	.157	.27	0	59	WW-5 min	42	21.39	.15	-.73	0	87
WW-5 min-B	34.57	12.95	-.269	-.32	2	56							
WW-5 min-C	35.89	14.8	.096	-.86	10	65							
WSC-3 min-A	14.07	6.5	.186	.31	2	32	WSC-3 min	21.36	10.29	.15	-.34	0	46
WSC-3 min-B	19.12	8.4	.01	-.78	2	35							
WSC-3 min-C	19.05	9.42	.42	.33	2	45							
WSC-5 min-A	23.96	10.86	.41	.72	0	56	WSC-5 min	38.07	19.75	.26	-.56	0	77
WSC-5 min-B	30.04	13.01	-.20	-.63	2	54							
WSC-5 min-C	30.98	14.15	.11	-.56	5	63							
CWS-3 min-A	10.98	5.66	.310	.02	0	24	CWS-3 min	18	9.73	.24	-.46	0	42
CWS-3 min-B	15.93	9.63	.501	-.26	1	39							
CWS-3 min-C	14.71	8.63	.41	-.14	1	37							

CWS-5 min-A	18.83	9.76	.4	-.04	0	42	CWS-5 min	33.14	19.25	.943	2.08	0	100
CWS-5 min-B	24.33	14.05	.31	-.43	2	58							
CWS-5 min-C	24.37	12.96	.09	-.5	2	53							
C-IWS-3 min-A	2.86	5.79	.-.07	-.32	11	14	C-IWS-3 min	7..57	9.83	-.06	.641	-18	32
C-IWS-3 min-B	5.86	12.73	.64	-.45	12	34							
C-IWS-3 min-C	3.05	9.63	-.08	1.12	24	27							
C-IWS-5 min-A	4.76	10.31	.59	.271	13	33	C-IWS-5 min	14.5	18.42	1.91	8.42	-26	95
C-IWS-5 min-B	6.87	17.22	.8	-.15	20	49							
C-IWS-5 min-C	4.89	14.10	.33	.91	28	45							
CLS-3 min-A	60.12	27.89	.12	-.06	5	125	CLS-3 min-	98.61	40.94	.14	.17	23	196
CLS-3 min-B	77.45	32.58	.08	-.72	15	145							
CLS-3 min-C	78.74	38.44	.36	.04	15	171							
CLS-5 min-A	102.89	47.39	.44	.39	0	226	CLS-5 min	171.70	78.04	-.11	-.4	40	341
CLS-5 min-B	123.74	50.24	-.16	-.28	8	234							
CLS-5 min-C	129.17	56.51	.17	-.41	31	275							

Table 11

Descriptive data for Picture-Theme Prompt in Study 2

	February							May					
	Mean	SD	Skewness	Kurtosis	Min	Max		Mean	SD	Skewness	Kurtosis	Min	Max
WW-3 min-A	15.19	7.19	.08	-.58	1	31	WW-3 min-A	18.1	10.76	.51	.40	0	47
WW-3 min-B	16.84	7.77	.09	.18	1	36	WW-3 min-B						
WW-3 min-C	20.16	10.73	.35	-.67	1	40	WW-3 min-C						
WW-5 min-A	22.5	10.33	-.20	-.36	0	43	WW-5 min-A	30.7	19.13	.65	0	1	80
WW-5 min-B	26.09	13.99	1.27	4.03	2	80	WW-5 min-B						
WW-5 min-C	30.93	16.36	.56	-.61	1	64	WW-5 min-C						
WSC-3 min-A	11.74	6.05	.37	-.27	1	26	WSC-3 min-A	14.48	8.93	.69	.98	0	42
WSC-3 min-B	13.77	7.13	.25	-.03	1	32	WSC-3 min-B						
WSC-3 min-C	16.90	9.54	.68	-.15	1	37	WSC-3 min-C						
WSC-5 min-A	17.50	9.07	.2	-.17	0	40	WSC-5 min-A	24.28	15.63	.84	.49	1	70
WSC-5 min-B	21.11	11.84	1.44	5.13	1	69	WSC-5 min-B						
WSC-5 min-C	25.75	14.12	.67	-.23	1	57	WSC-5 min-C						
CWS-3 min-A	8	5.31	.82	-.73	2	18	CWS-3 min-A	10.18	7.	.92	.47	0	29
CWS-3 min-B	8.9	6.14	.88	.69	0	24	CWS-3 min-B						
CWS-3 min-C	11.71	7.26	.67	-.4	1	29	CWS-3 min-C						

CWS-5 min-A	11.80	7.54	.52	-.88	0	26	CWS-5 min-A	16.88	11.89	1.162	.94	1	51
CWS-5 min-B	13.32	8.05	.715	.38	0	33	CWS-5 min-B						
CWS-5 min-C	18.32	10.88	.66	.01	1	45	CWS-5 min-C						
C-IWS-3 min-A	-0.77	6.95	-.06	.03	16	14	C-IWS-3 min-A	.4	7.38	.49	-.08	-12	17
C-IWS-3 min-B	-0.97	7.14	1.2	3.41	16	23	C-IWS-3 min-B						
C-IWS-3 min-C	1.19	7.82	.02	.46	16	17	C-IWS-3 min-C						
C-IWS-5 min-A	-1.50	9.66	-.38	.58	27	18	C-IWS-5 min-A	-.2	12.89	1	.24	-28	35
C-IWS-5 min-B	-1.68	9.29	.45	1.53	27	24	C-IWS-5 min-B						
C-IWS-5 min-C	1.73	12.26	-.16	.28	27	27	C-IWS-5 min-C						
CLS-3 min-A	56.26	29.39	.31	-.13	4	131	CLS-3 min-A						
CLS-3 min-B	64.79	29.77	.01	-.18	2	134	CLS-3 min-B						
CLS-3 min-C	74.35	42.12	.72	-.08	6	168	CLS-3 min-C						
CLS-5 min-A	83.25	42.65	.13	-.62	0	169	CLS-5 min-A						
CLS-5 min-B	95.30	46.39	.49	.51	7	215	CLS-5 min-B						
CLS-5 min-C	114.14	61.73	.71	-.12	6	260	CLS-5 min-C						

Table 12

Descriptive Data for Story Prompt in Study 2

	February							May					
	Mean	SD	Skewness	Kurtosis	Min	Max		Mean	SD	Skewness	Kurtosis	Min	Max
WW-3 min-A	15.71	8.49	.29	-.5	0	35	WW-3 min-A	18.65	9.99	.74	1.05	1	48
WW-3 min-B	18.45	9.09	.47	-.55	4	38	WW-3 min-B						
WW-3 min-C	17.08	9.55	.52	-.19	2	38	WW-3 min-C						
WW-5 min-A	26.07	14.39	.36	.07	0	66	WW-5 min-A	31.16	16.62	.78	.89	1	81
WW-5 min-B	28.07	14.22	.76	.02	5	62	WW-5 min-B						
WW-5 min-C	24.52	15.39	.67	-.22	1	64	WW-5 min-C						
WSC-3 min-A	11.68	7.56	.74	.18	0	32	WSC-3 min-A	16.000	9.095	1.039	2.202	1	47
WSC-3 min-B	13.74	8.15	.71	-.25	3	34	WSC-3 min-B						
WSC-3 min-C	12.39	7.33	.61	.13	0	32	WSC-3 min-C						
WSC-5 min-A	19.43	12.5	.74	.15	0	53	WSC-5 min-A	26.19	14.98	1.08	2.02	1	76
WSC-5 min-B	20.96	12.26	.88	.37	3	53	WSC-5 min-B						
WSC-5 min-C	17.78	12.31	.67	-.42	1	46	WSC-5 min-C						
CWS-3 min-A	7.71	6.64	1.03	.39	0	24	CWS-3 min-A	12.49	7.83	1.18	2.29	1	40
CWS-3 min-B	9.35	7.03	1.01	.55	0	29	CWS-3 min-B						
CWS-3 min-C	7.95	5.92	1.17	1.26	0	26	CWS-3 min-C						

CWS-5 min-A	12.61	10.66	1.11	.63	0	39	CWS-5 min-A	20.47	12.17	1.23	2.88	1	65
CWS-5 min-B	14.28	10.28	1.02	.78	1	46	CWS-5 min-B						
CWS-5 min-C	11.15	9.25	1.13	.76	0	38	CWS-5 min-C						
C-IWS-3 min-A	-1.68	7.64	.19	-.29	16	14	C-IWS-3 min-A	4.21	8.64	-.53	3.01	-26	27
C-IWS-3 min-B	-1.63	9	.36	.55	21	21	C-IWS-3 min-B						
C-IWS-3 min-C	-3.13	8.16	-.59	-.17	22	10	C-IWS-3 min-C						
C-IWS-5 min-A	-3.54	11.74	.26	.63	27	25	C-IWS-5 min-A	5.67	13.16	-.46	3.24	-40	42
C-IWS-5 min-B	-2.57	11.96	.23	.15	29	24	C-IWS-5 min-B						
C-IWS-5 min-C	-5.46	11.90	-.63	.22	35	15	C-IWS-5 min-C						
CLS-3 min-A	54.55	33.68	.26	-1.04	0	120	CLS-3 min-A	77.09	40.77	.85	1.99	1	210
CLS-3 min-B	66.26	35.56	.91	.92	13	172	CLS-3 min-B						
CLS-3 min-C	62.29	35.	.68	-.04	4	142	CLS-3 min-C						
CLS-5 min-A	93.57	55.78	.29	-.711	0	214	CLS-5 min-A	127.63	66.95	.984	1.65	1	338
CLS-5 min-B	102.22	57.02	1.19	1.651	21	293	CLS-5 min-B						
CLS-5 min-C	89.65	57.83	.73	-.05	2	236	CLS-5 min-C						

Table 13

*Descriptive Data for TOWL-3 Subtests: Study 1 (*n = *48)*

	Mean	*SD*	Min	Max	Skewness	Kurtosis
Subtest 6	1.67	2.14	0	10	2.23	5.55
Subtest 7	8.85	3.177	1	17	-0.07	0.59
Subtest 8	6.19	2.96	1	12	-0.31	-1.06
Total	16.71	6.73	3	31	0.37	0.05

Table 14

*Descriptive Data for TOWL-3 Subtests: Study 2 (*n = *44)*

	Mean	*SD*	Min	Max	Skewness	Kurtosis
Subtest 6	0.96	1.08	0	4	0.91	0.07
Subtest 7	8.23	2.27	1	12	-0.87	1.20
Subtest 8	4.43	2.76	0	11	0.27	-0.95
Total	13.61	4.85	1	23	-0.16	-0.06

Table 15

Study 1: Test-Retest and Alternate-Form Reliability (Pearson's r*)*

	3 min					5 min				
	WW		WSC		CLS	WW		WSC		CLS
Word Copy										
Test & Retest-A	.58**		.64**		.62**	.69**		.75**		.73**
Test & Retest-B	.72**		.65**		.78**	.83**		.80**		.81**
Alternate test	.54**		.54**		.68**	.66**		.67**		.72**
Alternate-retest	.83**		.82**		.85**	.86**		.86**		.891**
	WW	WSC	CWS	CIWS	CLS	WW	WSC	CWS	CIWS	CLS
Sentence Copy										
Test & Retest -A	.72**	.71**	.75**	.74**	.73**	.81**	.83**	.82**	.79**	.81**
Test & Retest -B	.79**	.78**	.78**	.85**	.74**	.85**	.82**	.82**	.89**	.80**
Alternate test	.73**	.70**	.75**	.69**	.68**	.78**	.79**	.82**	.79**	.76**
Alternate-Retest	.79**	75**	.72**	.77**	.74**	.82**	.79**	.75**	.83**	.79**
Story Prompt										
Test & Retest -A	.61**	.63**	.63**	.49**	.68**	.68**	.65**	.62**	.45**	.74**
Test & Retest -B	.60**	.64**	.72**	.74**	.70**	.78**	.81**	.83**	.75**	.83**
Alternate test	.56**	.47**	.58**	.67**	.58**	.69**	.74**	.70**	.65**	.78**
Alternate-Retest	.66**	.63**	.58**	.50**	.75**	.78**	.82**	.78**	.54**	.84**

Table 16

Study 2: Alternate-Form Reliability (Pearson r*)*

	3 min			5 min		
	WW	WSC	CLS	WW	WSC	CLS
Letter Prompt						
Form A & B	.65**	.62**	.58**	.70**	.71**	.68**
Form A & C	.38*	.44**	.46**	.52**	.58**	.59**
Form B & C	.58**	.63**	.70**	.74**	.77**	.81**

	WW	WSC	CWS	CIWS	CLS	WW	WSC	CWS	CIWS	CLS
Picture Theme										
Form A & B	.37*	.37*	.58**	.43*	.57**	.56**	.55**	.57**	.31*	.65**
Form A & C	.40*	.46**	.51**	.50**	.62**	.49**	.57**	.59**	.52**	.17
Form B & C	.59**	.59**	.60**	.59**	.64**	.70**	.65**	.608**	.68**	-.07
Picture Word										
Form A & B	.63**	.61**	.66**	.58**	.63**	.70**	.68**	.71**	.70**	.73**
Form A & C	.59**	.61**	.58**	.44**	.62**	.56**	.58**	.61**	.57**	.65**
Form B & C	.79**	.76**	.72**	.50**	.78**	.74**	.72**	.69**	.53**	.79**
Photo Prompt										
Form A & B	.74**	.75**	.73**	.56**	.80**	.84**	.82**	.76**	.44**	.85**
Form A & C	.58**	.60**	.66**	.40*	.63**	.73**	.79**	.73**	.39*	.79**
Form B & C	.69**	.70**	.78**	.54**	.76**	.72**	.66**	.68**	.57**	.46**

Table 17

Pearson-r *Correlation Coefficients with Teacher Ratings*

Correlations with Teacher 1 Rating-Study 1-Feb.

	3 minutes					5 minutes				
Word Copying	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.29	.32			.30	.26	.36			.32
Retest A	.04	.38			.25	.18	.45*			.36
Test-B	.10	.34			.31	.17	.42*			.29
Retest B	.03	.35			.19	.09	.41*			.26
Sentence Copying	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.21	.48*	.58**	.67**	.32	.25	.49*	.61**	.69**	.35
Retest A	.07	.37	.51**	.59**	.18	.10	.45*	.57**	.58**	.29
Test-B	-.08	.27	.32	.50**	.04	0	0.38	.45*	.53**	.21
Retest B	.25	.59**	.64**	.57**	.44*	.23	.63**	.63**	.55**	.50**
Story Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	-.17	.32	.46*	.51**	.40*	0	.51**	.57**	.57**	.56**
Retest A	.06	.41*	.39	.25	.63**	.57**	.60**	.55**	.39	.70**
Test-B	.20	.56**	.66**	.66**	.55**	.39*	.55**	.60**	.56**	.62**
Retest B	.58**	.75**	.74**	.54**	.72**	.50**	.69**	.70**	.53**	.67**

Correlations with Teacher 2 Rating-Study 1-Feb.

	3 minutes					5 minutes				
Word Copying	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.47*	.53**			.48*	.53**	.62**			.53**
Retest A	.45*	.53**			.47*	.43*	.51**			.47*
Test-B	.48*	.56**			.52**	.42*	.51**			.44*
Retest B	.41*	.48*			.45*	.46*	.51*			.49*
Sentence Copying	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS

Test A	.61**	.62**	.64**	.48*	.60**	.51*	.50*	.51*	.43*	.49*
Retest A	.20	.24	.24	.25	.20	.30	.33	.31	.30	.32
Test-B	.39	.45*	.45*	.41	.29	.41*	.45*	.44*	.41*	.36
Retest B	.50*	.49*	.54**	.42*	.47*	.47*	.45*	.47*	.32	.46*

Story Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.49*	.45*	.51*	.06	.56**	.53**	.52*	.50*	-.04	.61**
Retest A	.65**	.66**	.58**	.20	.65**	.59**	.60**	.56**	.18	.62**
Test-B	.60**	.63**	.62**	.17	.66**	.60**	.65**	.64**	.11	.67**
Retest B	.59**	.61**	.56**	.15	.63**	.69**	.66**	.57**	.09	.69**

Correlations with Teacher 3 Rating-Study2-Feb.

	3 minutes					**5 minutes**				
Letter Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.27	.29			.51*	.22	.21			.56**
Test-B	.52*	.42			.45*	.50*	.41			.46*
Test C	.42	.37			.47*	.47*	.45*			.51*

Picture Word	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.39	.39	.61**	.78**	.40	.39	.40	.60**	.68**	.40
Test-B	.48*	.60**	.72**	.59**	.53*	.56**	.69**	.80**	.70**	.61**
Test C	.27	.31	.51*	.62**	.37	.35	.37	.54*	.56**	.43*

Picture Theme	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.18	.25	.36	.32	.28	.04	.15	.33	.53*	.18
Test-B	..66**	.71**	.57*	.29	.66**	.37	.45*	.52*	.29	.43*
Test C	.52*	.55*	.56*	.26	.50*	.56*	.60**	.66**	.26	.59**

Photo Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.33	.44*	.58**	.60**	.51*	.37	.47*	.59**	.56**	.53*
Test-B	.35	.52*	.51*	.36	.53*	.40	.50*	.51*	.28	.50*
Test C	.33	.30	.34	.05	.34	.21	.24	.32	.20	.25

Correlations with Teacher 4 Rating-Study2-Feb.

3 minutes	**5 minutes**

Letter Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.53**	.47*			.59**	.60**	.57**			.64**
Test-B	.40*	.46*			.50*	.59**	.53**			.65**
Test C	.54*	.39			.61**	.55**	.49*			.63**

Picture Word	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.55**	.67**	.62**	.29	.59**	.49*	.56**	.60**	.46*	.55**
Test-B	.67**	.69**	.69**	.60**	.69**	.67**	.72**	.71**	.54**	.70**
Test C	.44*	.53**	.49*	.28	.59**	.44*	.49*	.58**	.45*	.59**

Picture Theme	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.64**	.68**	.62**	.18	.64**	.70**	.71**	.65**	.12	.76**
Test-B	.37	.39	.53*	.46*	.43*	.42*	.48*	.55*	.39	.51**
Test C	.45*	.47*	.50*	.27	.50*	.45*	.48*	.52*	.38	.51*

Photo Prompt	WW	WSC	CWS	C-IWS	CLS	WW	WSC	CWS	C-IWS	CLS
Test A	.63**	.71**	.69**	.32	.64**	.49*	.54**	.54**	.32	.54**
Test-B	.52*	.54**	.62**	.41	.67**	.52**	.54**	.58**	.32	.64**
Test C	-.03	.10	.29	.49*	.19	.27	.33	.48*	.37	.49*

Table 18

*Study 1: Pearson-*r *Correlation Coefficients with District Rubrics*

	Word Copy		Sentence Copy		Story Prompt	
	February	May	February	May	February	May
WW - 3 min-A	.48**	.48**	.61**	.57**	.37*	.57**
WW - 3 min-B	.38**		.46**		.57**	
WW - 3 min-A- Retest	.59**		.44**		.61**	
WW - 3 min-B- Retest	.41**		.66**		.55**	
WW - 5 min-A	.53**	.48**	.59**	.53**	.47**	.57**
WW - 5 min-B	.49**		.54**		.63**	
WW - 5 min-A- Retest	.60**		.53**		.65**	
WW - 5 min-B- Retest	.49**		.66**		.63**	
WSC - 3 min-A	.51**	.60**	.67**	.59**	.45**	.62**
WSC - 3 min-B	.46**		.48**		.63**	
WSC- 3 min-A- Retest	.65**		.49**		.62**	
WSC - 3 min-B- Retest	.47**		.66**		.60**	
WSC - 5 min-A	.59**	.58**	.63**	.57**	.56**	.63**
WSC - 5 min-B	.58**		.55**		.68**	
WSC - 5 min-A- Retest	.64**		.56**		.67**	
WSC - 5 min-B- Retest	.53**		.67**		.65**	
CWS - 3 min-A			.70**	.64**	.55**	.62**
CWS - 3 min-B			.51**		.66**	
CWS- 3 min-A- Retest			.52**		.58**	

CWS - 3 min-B- Retest			.65**		.59**	
CWS - 5 min-A			.65**	.61**	.59**	.65**
CWS - 5 min-B			.56**		.67**	
CWS - 5 min-A-Retest			.57**		.65**	
CWS - 5 min-B- Retest			.65**		.63**	
CIWS - 3 min-A			.62**	.61**	.32*	.47**
CIWS - 3 min-B			.42**		.40**	
CIWS- 3 min-A- Retest			.49**		.27	
CIWS - 3 min-B Retest			.52**			
CIWS - 5 min-A			.62**	.63**	.36*	.49**
CIWS - 5 min-B			.46**		.38**	
CIWS - 5 min-A- Retest			.53**		.31*	
CIWS - 5 min-B- Retest			.53**			
CLS - 3 min-A	.48**	.44**	.65**	.56**	.54**	.64**
CLS - 3 min-B	.52**		.43**		.71**	
CLS- 3 min-A- Retest	.61**		.44**		.70**	
CLS - 3 min-B- Retest	.46**		.65**			
CLS - 5 min-A	.56**	.54**	.59**	.53**	.62**	.64**
CLS - 5 min-B	.53**		.52**		.75**	
CLS- 5 min-A- Retest	.61**		.53**		.73**	
CLS - 5 min-B- Retest	.52**		.66**			

Table 19

Study 2: Pearson-r *Correlation Coefficients with District Rubrics*

	Letter Prompt		Picture-Word		Picture-Theme		Photo Prompt	
	February	May	February	May	February	May	February	May
WW - 3 min-A	.34*	.25	.50**	.39*	.37*	.19	.43**	.41**
WW - 3 min-B	.53**		.54**		.49**		.40**	
WW - 3 min-C	.25		.41**		.39*		.32*	
WW - 5 min-A	.31*	.27	.52**	.39*	.50**	.24	.43**	.36*
WW - 5 min-B	.51**		.60**		.49**		.43**	
WW - 5 min-C	.28		.40**		.33*		.32*	
WSC - 3 min-A	.16	.22	.55**	.44**	.39*	.24	.51**	.40**
WSC - 3 min-B	.45**		.56**		.53**		.46**	
WSC- 3 min-C	.11		.40**		.43**		.38*	
WSC -5 min-A	.11	.26	.54**	.39*	.53**	.26	.47**	.36*
WSC - 5 min-B	.38**		.62**		.52**		.45**	
WSC - 5 min-C	0.17		.41**		.33*		.35*	
CWS -3 min-A			.51**	.48**	.44**	.19	.58**	.44**
CWS - 3 min-B			.57**		.57**		.50**	
CWS- 3 min-C			.49**		.52**		.41**	

CWS -5 min-A			.52**	.37*	.54**	.22	.50**	.44**
CWS - 5 min-B			.66**		.56**		.46**	
CWS - 5 min-C			.51**		.38*		.43**	
CIWS-3 min-A			.24	.38*	.25	.06	.45**	.34*
CIWS-3 min-B			.44**		.36*		.29	
CIWS-3 min-C			.33*		.39*		.21	
CIWS-5 min-A			.24	.19	.25	.05	.29	.33*
CIWS-5 min-B			.49**		.24		0.27	
CIWS-5 min-C			.40**		.21		0.15	
CLS - 3 min-A	.29	.23	.51**	.44**	.37*	.27	.46**	.44**
CLS - 3 min-B	.55**		.52**		.49**		.45**	
CLS- 3 min-C	.30		.46**		.41**		.41**	
CLS - 5 min-A	.34*	.31*	.52**	.42**	.51**	.30	.45**	.41**
CLS - 5 min-B	.52**		.58**		.50**		.46**	
CLS- 5 min-C	.33*		.47**		.34*		.40**	

Table 20

Study 1: Concurrent Criterion Validity Correlation Coefficients with TOWL-3

	3 minutes					5 minutes				
	WW	WSC	CWS	CIWS	CLS	WW	WSC	CWS	C-IWS	CLS
					Word Copy (n = 47)					
TOWL Subtest 6	.28	.31*			.32*	.22	.25			.24
TOWL Subtest 7	.45*	.51**			.49**	.42**	.47**			.46**
TOWL Subtest 8	.05	.09			.22	0	.04			.15
Total	.29	.37*			.42**	.22	.29			.36*
					Sentence Copy (n = 45)					
TOWL Subtest 6	.33*	.34*	.38*	.37*	.34*	.36*	.40*	.44**	.49**	.36*
TOWL Subtest 7	.42**	.41**	.44**	.40**	.42**	.43**	.44**	.47**	.45**	.37*
TOWL Subtest 8	.07	.08	.13	.17	.07	.08	.12	.16	.23	.07
Total TOWL Score	.32*	.33*	.38*	.37*	.33*	.34*	.38*	.42**	.46**	.32*
					Story Prompt (n = 44)					
TOWL Subtest 6	.28	.29	.29	.21	.33*	.31*	.35*	.37*	.30*	.36*
TOWL Subtest 7	.55**	.58**	.57**	.40*	.64**	.55**	.59**	.58**	.36*	.63**
TOWL Subtest 8	.27	.29	.27	.15	.32*	.29	.30*	.27	.11	.33*
Total TOWL Score	.46**	.49**	.47**	.32*	.54**	.47**	.51**	.50**	.31*	.54**

Table 21

Study 2: Concurrent Criterion Validity Correlation Coefficients with TOWL-3

	3 minutes					5 minutes				
	WW	WSC	CWS	CIWS	CLS	WW	WSC	CWS	CIWS	CLS
	Letter Prompt (*n* = 43)									
TOWL Subtest 6	-.03	.05			.02	-.01	.08			.06
TOWL Subtest 7	.19	.17			.25	.22	.19			.26
TOWL Subtest 8	.19	.17			.20	.19	.19			.22
Total TOWL Score	.11	.06			.14	.55	.05			.13
Picture Word, n = 41										
TOWL Subtest 6	-.15	-.09	.01	.27	-.11	-.12	-.09	.06	-.11	-.11
TOWL Subtest 7	.18	.19	.26	.26	.24	.18	.17	.25	.24	.21
TOWL Subtest 8	.12	.14	.24	.28	.13	.13	.12	.23	.13	.13
Total TOWL Score	.06	.07	.19	.30	.08	-.01	-.03	.14	.08	0
Picture Theme, n = 41										
TOWL Subtest 6	.01	.05	.06	.14	.05	-.05	-.03	0	.12	-.02
TOWL Subtest 7	.28	.26	.28	.09	.32	.26	.22	.24	.01	.29
TOWL Subtest 8	.27	.31	.37*	.25	.35*	.20	.22	.25	.19	.25
Total TOWL Score	.20	.15	.13	-.07	.22	.15	.09	.04	-.13	.16
Photo Prompt, n = 40										
TOWL Subtest 6	-.14	-.18	-.16	-.08	.44	-.14	-.18	-.15	-.08	-.12
TOWL Subtest 7	.33*	.28	.23	-.01	.05	.26	.21	.17	-.04	.25
TOWL Subtest 8	.13	.09	.07	-.04	.36	.11	.05	.06	-.05	.14
Total TOWL Score	.20	.15	.07	-.10	.22	.14	.09	.05	-.10	.17

Table 22

Paired Samples T-Test (Feb. Test A --May Test)

	Mean Difference	t value	p value	n
Sentence Copy (3 min)				
WW	-8.49	-7.32	.000	45
WSC	-8.60	-7.53	.000	45
CWS	-10.42	-7.3	.000	45
CIWS	-10.91	-6.07	.000	45
CLS	-37.73	-7.37	.000	45
Sentence Copy (5 min)				
WW	-15.56	-8.16	.000	47
WSC	-15.23	-8.55	.000	47
CWS	-17.68	-8.88	.000	47
CIWS	-16.91	-7.03	.000	47
CLS	-64.43	-8.24	.000	47
Photo Prompt (3 min)				
WW	-3.49	-3.18	.003	41
WSC	-4.73	-4.71	.000	41
CWS	-5.07	-5.46	.000	41
CIWS	-5.83	-4.42	.000	41
CLS	-24.88	-5.68	.000	41
Photo Prompt (5 min)				
WW	-3.80	-2.27	.028	44
WSC	-5.68	-3.86	.000	44
CWS	-6.96	-5.20	.000	44
CIWS	-9.00	-4.41	.000	44
CLS	-29.18	-4.36	.000	44
Story Prompt (5 min)				
WW	-14.11	-5.70	.000	47
WSC	-13.74	-6.45	.000	47
CWS	-8.09	-4.38	.000	45
CIWS	4.85	-2.38	.021	47
CLS	-55.47	-5.65	.000	47
Picture-Word Prompt (3 min)				
WW	-7.51	-4.28	.000	41
WSC	-7.34	-4.55	.000	41
CWS	-7.17	-4.56	.000	41
CIWS	-1.62	-.95	.346	42
CLS	-13.17	-2.09	.043	41

Table 23

Mean differences from February to May

	WW	WSC	CWS	CIWS	CLS
Sentence copy					
Feb_3 min	18.51	16.2	16.58	10.49	70.07
May_3 min	27	24.8	27	21.4	107.8
Feb_5 min	29.82	26.8	27.53	19.11	119.47
May-5 min	45.51	41.96	45.22	35.82	183.84
Story Prompt					
Feb_5 min	21.91	15.22	10.69	-2.47	81.27
May_5 min	36.4	28.51	20.68	1.23	135.02
Picture-Word Prompt					
Feb_3min	16.44	14.33	11.17	3.03	59.92
May_3 min	24.42	22	18.58	7.89	95.69
Photo Prompt					
Feb_3 min	16.06	12.17	8.11	-1.11	43.95
May_3 min	19.69	16.97	13.31	4.75	81.89
Feb_5 min	28.53	21.67	14.22	-2.97	102.22
May-5 min	33.19	28.03	22.03	6.56	136.25