APPENDIX S:
ELA ALIGNMENT STUDY TECHNICAL REPORT

REPORT

Alignment Analysis of Language Arts Standards and Assessments

Michigan
Grades 3–8

Norman L. Webb

November 15, 2005

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This study is one of the three alignment studies conducted for the State of Michigan. The Alignment Analysis Institute was held September 21–23, 2005, in Lansing, Michigan. The report consists of a description of the four criteria used to judge the alignment between Michigan Language Arts Academic Content Standards and one assessment for each grade. Grade 3 assessment was compared to grade 2 standards, grade 4 assessment was compared to grade 3 standards, grade 5 assessment was compared to the grade 4 standards, grade 6 assessment was compared to grade 5 standards, grade 7 assessment was compared to grade 6 standards, and the grade 8 assessment was compared to grade 7 standards. This report includes tables listing the results of 7 to 12 reviewers' coding of the assessments.

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Executive Summary

This is a report of the results from a three-day Alignment Analysis Institute that was conducted September 21, 22, and 23, 2005, in Lansing, Michigan. Twelve reviewers, including language arts content experts, district language arts supervisors, and language arts teachers, met to analyze the agreement between the state's language arts standards and assessments for grades 3 through 8. Eight reviewers were from Michigan, and four were experts with experience from other states.

The alignment between the assessments and the language arts standards at each grade was acceptable. The over-emphasis on one or two reading objectives on the assessment is not a critical alignment issue, since all of the other alignment criteria were fully met. The alignment between the assessments and the writing standard at each grade needs slight improvement. One to three more objectives for each grade need to have at least one corresponding item for the assessments to fully meet the Range-of-Knowledge Correspondence criterion. Reviewers were very consistent in assigning items to standards, but showed less consistency in assigning items to specific grade-level expectations. This implies some overlap in content covered by the grade-level expectations, or lack of clarity in the written statements. Because reviewers found it difficult to distinguish among many of the objectives, this lowered the reviewer agreement on the precise objective measured by an item. The reviewers observed that the coverage of content on the assessments improved over the grades. Reviewers indicated there were some very challenging items on the grade 7 and grade 8 assessments.

Alignment Analysis of Language Arts Standards and Assessments

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Introduction

The alignment of expectations for student learning with assessments for measuring students' attainment of these expectations is an essential attribute for an effective standards-based education system. Alignment is defined as the degree to which expectations and assessments are in agreement and serve in conjunction with one another to guide an education system toward students learning what they are expected to know and do. As such, alignment is a quality of the relationship between expectations and assessments and not an attribute of any one of these two system components. Alignment describes the match between expectations and assessment that can be legitimately improved by changing either student expectations or the assessments. As a relationship between two or more system components, alignment is determined by using the multiple criteria described in detail in a National Institute for Science Education (NISE) research monograph, *Criteria for Alignment of Expectations and Assessments in Language Arts and Science Education* (Webb, 1997).

A three-day Alignment Analysis Institute was conducted September 21, 22, and 23, 2005, in Lansing, Michigan. Twelve people, including language arts content experts, district language arts supervisors, and language arts teachers, met to analyze the agreement between the state's language arts standards and assessments for six grades. Each set of standards was compared to the assessment administered in the fall of the next grade level. That is, the grade 2 standards were compared with the grade 3 assessment, the grade 3 standards were compared with the grade 4 assessment, and so on.

For the purposes of this analysis, we have employed the convention of standards, goals, and objectives to describe three levels of expectations for what students are to know and do. Standard is used here as the most general (for instance, *Reading*). There are two such standards for grades 2 through 7, *Reading* and *Writing*. Each standard is comprised of four to six or goals, each of which is comprised of up to eight grade-level expectations (objectives). These objectives are intended to span the content of the goals and standards under which they fall. The standards, goals, and objectives are reproduced in Appendix A.

Reviewers were trained to identify the depth-of-knowledge of objectives and assessment items. This training included reviewing the definitions of the four depth-of-knowledge (DOK) levels and reviewing examples of each. Then the reviewers participated in 1) a consensus process to determine the depth-of-knowledge levels of the

Michigan content objectives and 2) individual analyses of the assessment items of each of the six assessments.

To derive the results on the degree of agreement between the Michigan language arts standards and each assessment, the reviewers' responses are averaged. Any variance among reviewers is considered legitimate, with the true depth-of-knowledge level for the item falling somewhere between two or more assigned values. Such variation could signify a lack of clarity in how the objectives were written, the robustness of an item that can legitimately correspond to more than one objective, and/or a depth of knowledge that falls in between two of the four defined levels. Reviewers were allowed to identify one assessment item as corresponding to up to three objectives—one primary hit (objective) and up to two secondary hits. However, reviewers could only code one depth-of-knowledge level to each assessment item, even if the item corresponded to more than one objective. Finally, in addition to learning the process, reviewers were also asked to provide suggestions for improving it.

Reviewers were instructed to focus primarily on the alignment between the state standards and the various assessments. However, they were encouraged to offer their opinions on the quality of the standards, or of the assessment activities/items, by writing a note about the item. Reviewers could also indicate whether there was a source-of-challenge issue with the item—i.e., a problem with the item that might cause the student who knows the material to give a wrong answer, or enable someone who does not have the knowledge being tested to answer the item correctly. For example, a language arts item that requires specialized knowledge from another area, such as science or mathematics, beyond the reading comprehension may represent a source-of-challenge issue because the skill required to answer is more than a reading skill.

The results produced from the institute pertain only to the issue of agreement between the Michigan state standards and the six assessment instruments. Note that this alignment analysis does not serve as external verification of the general quality of the state's standards or assessments. Rather, only the degree of alignment is discussed in these results. The averages of the reviewers' coding were used to determine whether the alignment criteria were met. When reviewers did vary in their judgments, the averages lessened the error that might result from any one reviewer's finding. Standard deviations are reported, which give one indication of the variance among reviewers.

To report on the results of an alignment study of Michigan's curriculum standards and six different standardized assessments, the study addressed specific criteria related to the content agreement between the state standards and grade-level assessments. Four alignment criteria received major attention: categorical concurrence, depth-of-knowledge consistency, range-of-knowledge correspondence, and balance of representation.

Alignment Criteria Used for This Analysis

This analysis, which judged the alignment between standards and assessments on the basis of four criteria, also reported on the quality of items by identifying items with sources of challenge and other issues. For each alignment criterion, an acceptable level was defined by what would be required to assure that a student had met the standards.

Categorical Concurrence

An important aspect of alignment between standards and assessments is whether both address the same content categories. The categorical-concurrence criterion provides a very general indication of alignment if both documents incorporate the same content. The criterion of categorical concurrence between standards and assessment is met if the same or consistent categories of content appear in both documents. This criterion was judged by determining whether the assessment included items measuring content from each standard. The analysis assumed that the assessment had to have at least six items measuring content from a standard in order for an acceptable level of categorical concurrence to exist between the standard and the assessment. The number of items, six, is based on estimating the number of items that could produce a reasonably reliable subscale for estimating students' mastery of content on that subscale. Of course, many factors have to be considered in determining what a reasonable number is, including the reliability of the subscale, the mean score, and cutoff score for determining mastery. Using a procedure developed by Subkoviak (1988) and assuming that the cutoff score is the mean and that the reliability of one item is .1, it was estimated that six items would produce an agreement coefficient of at least .63. This indicates that about 63% of the group would be consistently classified as masters or nonmasters if two equivalent test administrations were employed. The agreement coefficient would increase if the cutoff score were increased to one standard deviation from the mean to .77 and, with a cutoff score of 1.5 standard deviations from the mean, to .88. Usually, states do not report student results by standards, or require students to achieve a specified cutoff score on subscales related to a standard. If a state did do this, then the state would seek a higher agreement coefficient than .63. Six items were assumed as a minimum for an assessment measuring content knowledge related to a standard and as a basis for making some decisions about students' knowledge of that standard. If the mean for six items is 3 and one standard deviation is one item, then a cutoff score set at 4 would produce an agreement coefficient of .77. Any fewer items with a mean of one-half of the items would require a cutoff that would only allow a student to miss one item. This would be a very stringent requirement, considering a reasonable standard error of measurement on the subscale.

Depth-of-Knowledge Consistency

Standards and assessments can be aligned not only on the category of content covered by each, but also on the basis of the complexity of knowledge required by each. *Depth-of-knowledge consistency between standards and assessment indicates alignment*

if what is elicited from students on the assessment is as demanding cognitively as what students are expected to know and do as stated in the standards. For consistency to exist between the assessment and the standard, as judged in this analysis, at least 50% of the items corresponding to an objective had to be at or above the level of knowledge of the objective: 50%, a conservative cutoff point, is based on the assumption that a minimal passing score for any one standard of 50% or higher would require the student to successfully answer at least some items at or above the depth-of-knowledge level of the corresponding objectives. For example, assume an assessment included six items related to one standard and students were required to answer correctly four of those items to be judged proficient—i.e., 67% of the items. If three, 50%, of the six items were at or above the depth-of-knowledge level of the corresponding objectives, then to achieve a proficient score would require the student to answer correctly at least one item at or above the depth-of-knowledge level of one objective. Some leeway was used in this analysis on this criterion. If a standard had between 40% to 50% of items at or above the depth-of-knowledge levels of the objectives, then it was reported that the criterion was "weakly" met.

Interpreting and assigning depth-of-knowledge levels to standards and assessment items is an essential requirement of alignment analysis. The reading levels are based on Valencia and Wixson (2000, pp. 909-935). Marshá Horton, Sharon O'Neal, and Phoebe Winter developed the writing levels. The following definitions of depth-of-knowledge levels were used in this language arts analysis:

Reading

Reading Level 1. Level 1 requires students to receive or recite facts or to use simple skills or abilities. Oral reading that does not include analysis of the text, as well as basic comprehension of a text, is included. Items require only a shallow understanding of the text presented and often consist of verbatim recall from text, slight paraphrasing of specific details from the text, or simple understanding of a single word or phrase. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Support ideas by reference to verbatim, or only slightly paraphrased, details from the text.
- Use a dictionary to find the meanings of words.
- Recognize figurative language in a reading passage.

Reading Level 2. Level 2 includes the engagement of some mental processing beyond recalling or reproducing a response; it requires both comprehension and subsequent processing of text or portions of text. Inter-sentence analysis of inference is required. Some important concepts are covered, but not in a complex way. Standards and items at this level may include words such as summarize, interpret, infer, classify, organize, collect, display, compare, and determine whether fact or opinion. Literal main ideas are stressed. A Level 2 assessment item may require students to apply skills and concepts that are covered in Level 1. However, items require closer understanding of

text, possibly through the item's paraphrasing of both the question and the answer. Some examples that represent, but do not constitute all of, Level 2 performance are:

- Use context cues to identify the meaning of unfamiliar words, phrases, and expressions that could otherwise have multiple meanings.
- Predict a logical outcome based on information in a reading selection.
- Identify and summarize the major events in a narrative.

Reading Level 3. Deep knowledge becomes a greater focus at Level 3. Students are encouraged to go beyond the text; however, they are still required to show understanding of the ideas in the text. Students may be encouraged to explain, generalize, or connect ideas. Standards and items at Level 3 involve reasoning and planning. Students must be able to support their thinking. Items may involve abstract theme identification, inference across an entire passage, or application of prior knowledge. Items may also involve more superficial connections between texts. Some examples that represent, but do not constitute all of, Level 3 performance are:

- Explain or recognize how author's purpose affects the interpretation of a reading selection.
- Summarize information from multiple sources to address a specific topic.
- Analyze and describe the characteristics of various types of literature.

Reading Level 4. Higher-order thinking is central and knowledge is deep at Level 4. The standard or assessment item at this level will probably be an extended activity, with extended time provided for completing it. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require the application of significant conceptual understanding and higher-order thinking. Students take information from at least one passage of a text and are asked to apply this information to a new task. They may also be asked to develop hypotheses and perform complex analyses of the connections among texts. Some examples that represent, but do not constitute all of, Level 4 performance are:

- Analyze and synthesize information from multiple sources.
- Examine and explain alternative perspectives across a variety of sources.
- Describe and illustrate how common themes are found across texts from different cultures.

Writing

Writing Level 1. Level 1 requires the student to write or recite simple facts. The focus of this writing or recitation is not on complex synthesis or analysis, but on basic ideas. The students are asked to list ideas or words, as in a brainstorming activity, prior to written composition; are engaged in a simple spelling or vocabulary assessment; or are asked to write simple sentences. Students are expected to write, speak, and edit using the conventions of Standard English. This includes using appropriate grammar, punctuation, capitalization, and spelling. Students demonstrate a basic understanding and appropriate

use of such reference materials as a dictionary, thesaurus, or Web site. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Use punctuation marks correctly.
- Identify Standard English grammatical structures, including the correct use of verb tenses.

*Writing Level 2***.** Level 2 requires some mental processing. At this level, students are engaged in first-draft writing, or in brief extemporaneous speaking for a limited number of purposes and audiences. Students are expected to begin connecting ideas, using a simple organizational structure. For example, students may be engaged in note-taking, outlining, or simple summaries. Text may be limited to one paragraph. Some examples that represent, but do not constitute all of, Level 2 performance are:

- Construct or edit compound or complex sentences, with attention to correct use of phrases and clauses.
- Use simple organizational strategies to structure written work.
- Write summaries that contain the main idea of the reading selection and pertinent details.

*Writing Level 3***.** Level 3 requires some higher-level mental processing. Students are engaged in developing compositions that include multiple paragraphs. These compositions may include complex sentence structure and may demonstrate some synthesis and analysis. Students show awareness of their audience and purpose through focus, organization, and the use of appropriate compositional elements. The use of appropriate compositional elements includes such things as addressing chronological order in a narrative, or including supporting facts and details in an informational report. At this stage, students are engaged in editing and revising to improve the quality of the composition. Some examples that represent, but do not constitute all of, Level 3 performance are:

- Support ideas with details and examples.
- Use voice appropriate to the purpose and audience.
- Edit writing to produce a logical progression of ideas.

*Writing Level 4***.** Higher-level thinking is central to Level 4. The standard at this level is a multi-paragraph composition that demonstrates the ability to synthesize and analyze complex ideas or themes. There is evidence of a deep awareness of purpose and audience. For example, informational papers include hypotheses and supporting evidence. Students are expected to create compositions that demonstrate a distinct voice and that stimulate the reader or listener to consider new perspectives on the addressed ideas and themes. An example that represents, but does not constitute all of, Level 4 performance is:

- Write an analysis of two selections, identifying the common theme and generating a purpose that is appropriate for both.

Range-of-Knowledge Correspondence

For standards and assessments to be aligned, the breadth of knowledge required on both should be comparable. *The range-of-knowledge criterion is used to judge whether a comparable span of knowledge expected of students by a standard is the same as, or corresponds to, the span of knowledge that students need in order to correctly answer the assessment items/activities.* The criterion for correspondence between span of knowledge for a standard and an assessment considers the number of objectives within the standard with one related assessment item/activity. Fifty percent of the objectives for a standard had to have at least one related assessment item in order for the alignment on this criterion to be judged acceptable. This level is based on the assumption that students' knowledge should be tested on content from over half of the domain of knowledge for a standard. This assumes that each objective for a standard should be given equal weight. Depending on the balance in the distribution of items and the necessity for having a low number of items related to any one objective, the requirement that assessment items need to be related to more than 50% of the objectives for a standard increases the likelihood that students will have to demonstrate knowledge on more than one objective per standard to achieve a minimal passing score. As with the other criteria, a state may choose to make the acceptable level on this criterion more rigorous by requiring an assessment to include items related to a greater number of the objectives. However, any restriction on the number of items included on the test will place an upper limit on the number of objectives that can be assessed. Range-of-knowledge correspondence is more difficult to attain if the content expectations are partitioned among a greater number of standards and a large number of objectives. If 50% or more of the objectives for a standard had a corresponding assessment item, then the range-of-knowledge criterion was met. If between 40% to 50% of the objectives for a standard had a corresponding assessment item, the criterion was "weakly" met.

Balance of Representation

In addition to comparable depth and breadth of knowledge, aligned standards and assessments require that knowledge be distributed equally in both. The range-of-knowledge criterion only considers the number of objectives within a standard hit (a standard with a corresponding item); it does not take into consideration how the hits (or assessment items/activities) are distributed among these objectives. *The balance-of-representation criterion is used to indicate the degree to which one objective is given more emphasis on the assessment than another.* An index is used to judge the distribution of assessment items. This index only considers the objectives for a standard that have at least one hit—i.e., one related assessment item per objective. The index is computed by considering the difference in the proportion of objectives and the proportion of hits assigned to the objective. An index value of 1 signifies perfect balance and is obtained if the hits (corresponding items) related to a standard are equally distributed among the objectives for the given standard. Index values that approach 0 signify that a large proportion of the hits are on only one or two of all of the objectives hit. Depending on the number of objectives and the number of hits, a unimodal distribution (most items related to one objective and only one item related to each of the remaining objectives) has an

index value of less than .5. A bimodal distribution has an index value of around .55 or .6. Index values of .7 or higher indicate that items/activities are distributed among all of the objectives at least to some degree (e.g., every objective has at least two items) and is used as the acceptable level on this criterion. Index values between .6 and .7 indicate the balance-of-representation criterion has only been "weakly" met.

Source-of-Challenge

The source-of-challenge criterion is only used to identify items on which the major cognitive demand is inadvertently placed and is other than the targeted language arts skill, concept, or application. Cultural bias or specialized knowledge could be reasons for an item to have a source-of-challenge problem. Such item characteristics may result in some students not answering an assessment item, or answering an assessment item incorrectly, or at a lower level, even though they possess the understanding and skills being assessed.

Findings

Standards

Twelve reviewers participated in the depth-of-knowledge (DOK) level consensus process for the standards and objectives for the Michigan language arts standards. A summary of their deliberations is presented in Table 1. The complete group consensus values for each competency and objective can be found in Appendix A.

The complexity of the objectives remained about the same across the six grades, grades 2 through 7, with only a small increase in complexity in the higher grades. In each grade, about 40% of the objectives were judged to have a DOK level of 3 (Reasoning and Inferencing) and 4 (Extending Thinking). There is some decrease in the proportion of objectives at DOK Level 1 (Recall), accompanied by some increase in the proportion of objectives at DOK Level 2 (Comprehension) in the higher grades. The variation between grade 4 and grade 5 in the percentage of objectives with DOK level of 2 was the highest, with a 16% increase at grade 5 compared to grade 4. Thus, the language arts reading academic content standards have some increased sophistication across grades, mainly with the increase in expectations requiring comprehension and skill applications at grade 5 from expectations that require recall and recognition.

The reviewers were told that, within each standard (e.g., *Reading*), the goals were intended to fully span the content of that standard and, in turn, each goal is spanned by the objectives that fall under it. For this reason, the reviewers only coded items to a goal if there were no objectives that the item appeared to target. Likewise, the reviewers only coded an item to a standard if there were no objectives or goals that the item targeted. Such items are considered to target a generic objective. A large number of items coded to generic objectives may indicate ways in which a standard's content is not fully spanned or described by its goals or objectives. This may also simply indicate that these items are not as precise as the objectives. Table 2 shows the three items for all six of the

assessments that were coded to the generic objective by more than one reviewer. Three reviewers coded item 49 on the grade 3 assessment and two reviewers coded items 51 and 57 on the grade 8 assessment to the goal W.PR (Writing Process). These reviewers felt that none of the objectives under the goal W.PR adequately matched the item on the assessment. For example, one reviewer coded item 49 to W.PR because one specific objective or grade expectation appears to address creating a title. Since very few items were coded to a generic objective, the grade-level expectations were worded specifically enough so that reviewers were able to find a match on nearly all of the items to at least one expectation.

Table 1
Percent of Objectives by Depth-of-Knowledge (DOK) Levels for Grades 2–7 Standards, Michigan Alignment Analysis for Language Arts

Grade	Total number of objectives	DOK Level	# of objs by Level	% within std by Level
2	34	1	7	20
		2	13	38
		3	9	26
		4	5	14
3	26	1	5	19
		2	9	34
		3	11	42
		4	1	3
4	26	1	6	23
		2	8	30
		3	12	46
5	26	1	3	11
		2	12	46
		3	9	34
		4	2	7
6	27	1	4	14
		2	12	44
		3	10	37
		4	1	3
7	27	1	4	14
		2	11	40
		3	10	37
		4	2	7

Table 2
Items Coded to Generic Objectives by More Than One Reviewer, Michigan Alignment Analysis for Language Arts, Grades 3-8

Grade Level	Assessment Item	Generic Objective (Number of Reviewers)
3	49	W.PR (3)
4	None	
5	None	
6	None	
7	None	
8	51, 57	W.PR (2)

Reviewers were also given the option of coding an item as "uncodable" if it did not fit under any of the standards. No items were considered uncodable by more than one reviewer. This indicates that all of the items on the assessments were judged to relate to one of the Michigan language arts standards.

Alignment of Curriculum Standards and Assessments

The results from the alignment analysis for the six grades are presented in Table 3. "Yes" indicates that an acceptable level on the criterion was fully met. "WEAK" indicates that the criterion was nearly met, within a margin that could simply be due to error in the system. "NO" indicates that the criterion was not met by a noticeable margin. (More detailed data on each of the criteria are given in Appendix B in the first three tables for each of the grade levels. The first table for each assessment, Table 3–8 (grade level).1, lists the average number of items coded by the 12 reviewers for each standard.)

The grade 3 language arts assessment had 37 items. The assessments for the other five grades had 45 items. All of the items were multiple-choice items. The distribution of items was consistent across grades, with about 80% of the items measuring content related to reading and 20% of the items measuring content related to writing.

The alignment between the language arts assessments and the previous grade's standards was acceptable for reading and, generally, good for writing. For both of these content areas, three of the four alignment criteria were fully met (Table 3). The alignment between the reading assessments and standards had an acceptable level for Categorical Concurrence, Depth-of-Knowledge Consistency, and Range-of-Knowledge Correspondence. This means that for each grade level the assessment had an adequate number of items at a sufficient level of complexity and that covered an ample proportion of the objectives.

Table 3
Summary of Acceptable Levels on the Four Alignment Criteria for Language Arts Grades 3–8 Assessments for Michigan Alignment Analysis

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
Grade 3				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	NO	WEAK
Grade 4				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES
Grade 5				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	NO	YES
Grade 6				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES
Grade 7				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES
Grade 8				
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES

The reading assessments and standards, however, only weakly met the Balance-of-Representation criterion. For all grades, the assessment overemphasized one or two objectives by including a large number of items related to these objectives compared to the other objectives. In general, an inordinately large proportion of the items on each assessment corresponded to the objective related to determining the main idea, retelling the narrative, or summarizing. Even though there were over 25 objectives at each grade to be assessed, the one objective (generally R.CM.2) had over 20% of the items. For most grades, a second objective that related to connecting personal knowledge, experience, and understanding of the world to themes and perspectives in the text also had a large proportion of corresponding items. It is very common for language arts tests to overemphasize assessing student knowledge of the main idea from a text. Because the total number of items, breadth, and depth on the Michigan assessments were acceptable for reading, only weakly meeting the Balance criterion is not considered a critical issue.

The state has the option to place a greater emphasis on one objective compared to other objectives.

The writing objectives numbered from 11 for grades 3 through 7 to 13 for grade 2. On the average, reviewers coded assessment items to four or five of the writing objectives, less than the acceptable level for the Range-of-Knowledge Correspondence criterion of 50% or more of the objectives with at least one corresponding items. Thus, the Range criterion was only weakly met for grades 4, 6, 7, and 8 and not met for grades 3 and 5. Nearly half of the writing grade-level expectations would require students to produce a writing sample for proper assessment. This means that nearly all of the remaining objectives would need to have a corresponding item to fully meet the range criterion.

Those writing objectives with corresponding assessment items most frequently were related to the writing process, grammar and usage, and spelling. For grades 4, 6, 7, and 8, the breadth on the assessments could be improved sufficiently by including one more item that measured an objective not currently assessed. For grade 3, three additional objectives would need to be assessed. For grade 5, two additional objectives would need to be assessed. The grade 3 assessment and the grade 2 standards only weakly met the balance criterion for writing. If the assessment included additional items to achieve adequate breadth, the balance issue would be resolved also.

Action Needed for Assessments and Standards to be Fully Aligned

In summary, because the alignment between the assessments for grades 3–8 and the standards for grades 2–7 is reasonable, only slight changes in the assessment of writing are needed to achieve full alignment. To achieve full alignment would require these changes or modifications:

Grade 3. Three items need to be replaced by items that measure grade expectations for writing that are not currently assessed. Five of the eight items coded by reviewers as assessing writing corresponded to one grade-level expectation, W.GR.1 (grammar and usage). The reviewers did not consistently agree on what grade-level expectations the other three items measured, but they did agree that these items measured content knowledge related to the writing process. Full alignment could be achieved by replacing three of the items related to grammar and usage with items that more clearly measured grade-level expectations under the writing process, writing genres, and spelling. This action would also improve the balance.

Grade 4. One writing item needs to be replaced by an item that clearly relates to a writing objective not currently measured. For example, one of items 53, 54, or 56 that currently assess content knowledge related to grammar could be replaced by an item measuring content related to Objective W.PR.6.

Grade 5. Two items need to be replaced by items that clearly relate to a writing objective not currently measured. Reviewers coded fewer items as corresponding to

writing objectives at grade 5 than other grades. Therefore, it would be better for two reading items to be replaced by items that measure writing objectives not currently assessed.

Grades 6, 7, and 8. One writing item needs to be replaced by an item that clearly relates to a writing objective not currently measured.

Source of Challenge

Reviewers were asked to indicate whether there was a source-of-challenge issue on any of the items. (The concerns expressed by the reviewers are given in the fifth table for each grade (Tables (grade).5) in Appendix B.) Reviewers did not identify any source-of-challenge issues on the grade 3 assessments. On the other assessments, reviewers only wrote a few comments. Some of the comments pertained to the statement of the objectives, while others indicated a problem with an item including multiple answers and issues with distractors. In general, reviewers found very few issues with the items.

Notes

Some reviewers made other comments about the items, which they recorded as notes. (These notes are presented in the seventh table for each grade (Tables (grade).7) in Appendix B.) The notes of some reviewers correspond to the source of challenge noted by other reviewers. The authors of these notes and of the source-of-challenge notation thus added at times to the number of reviewers who had a concern about a specific item. Reviewers' notes sometimes clarify the match between the item and the objective as being weak. The notes also indicate issues that a reviewer might have found with an item and his/her suggestion regarding how the item could be improved.

General Comments Made By Reviewers

After coding each assessment, each reviewer was asked to complete a sheet with four questions on it about their opinions of the general alignment between the standards and the assessments:

A. For each standard, did the items cover the most important topics you expected from the standard? If not, what topics were not assessed that should have been?
B. For each standard, did the items cover the most important performance (DOK levels) you expected of the standard? If not, what performance was not assessed?
C. Was there any content you expected to be assessed, but found no items assessing that content? What was that content?
D. What is your general opinion of the alignment between the standards and assessment:
   i. Perfect alignment
   ii. Acceptable alignment

iii. Needs slight improvement
iv. Needs major improvement
v. Not aligned in any way.

E. Other Comments.

These responses indicate the reflections of reviewers at the time of coding. They complement and inform the more rigorous analysis, but should not be interpreted as definitive, only impressionistic. The responses by the language arts reviewers are presented below. First, we begin with overall comments made by all reviewers, as a group, at the end of the institute. Then, we make some generalizations about the reviewer comments. Finally, we present all of their responses, word for word.

Language Arts Grade 3
(Group summary comments in bold.)

A. *For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?*

- R.CM.5, R.CM.6, R.CM.7 no items
- No R.CM. 5-7. Overbalanced with R.CM.2 (a general comprehension one)
- The specificity of the items creates problems for both instruction and assessment. It also excludes important less specific items, like purpose of author, theme, etc.
- Assessments did not provide a place for students to plan their writing. Not much vocabulary in context (Level 2), mostly Level 1s. Mostly R.CM 1-4 found; R.CM 5-7 not found. Many R.CM.2.
- **No space for planning writing. Not enough vocabulary in context. Specificity of items creates problems for both instruction and assessment. Over-balanced on general comprehension (R.CM.2), R.CM.5, R.CM.6, R.CM.7 = no items.**

B. *For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?*

- WPR GLCEs need to be a little more exact to best represent all of the stages of the process.
- Fair balance for these, but some very easy items here.
- No.
- Most items were 1s and 2s. Some 3s in writing. Variety of non-fiction, fiction and poetry—balanced. All cultures represented??? Many details. Much on writing.
- **Too many Level 1s in vocabulary. Not enough balance within standards. Good on writing. GLCEs need to be a little more exacting to represent all stages of the process.**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- Literacy devices. Author's purpose. Poetry.
- Spelling
- Author's purpose. Reading to theme. Inferences/deduction.
- 1 spelling. Some grammar/usage. No personal style. No purpose in standards at this grade level. Some genre.
- **Literary devices. Spelling. Author purpose. Personal style. Poetry. Inference deduction.**

D. What is your general opinion of the alignment between the standards and assessment?

- Acceptable alignment.
- Acceptable alignment.
- Good job of getting at higher levels.
- What should the percentage of items represented in the assessment be?
- Needs slight improvement.
- **Acceptable alignment. Needs slight improvement (somewhere in this area)**

E. Other comments.

- Author's purpose. Literary devices. Very good balance. Poetry?
- Writer's purpose – no category.
- Good use of paired texts; good variety in the kinds of writing tasks required. The standards are written at a much higher level than most of the items.
- **Begin with a middle grade and work down and up from there would help perspective. Generally good balance. No category fits author's purpose items. Good use of paired texts.**

Language Arts Grade 5
(Group summary comments in bold.)

A. For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?

- Almost no spelling or grammar items. Writing prompts were not directed to kinds of writing in Standards.
- Not addressed: R.CM.5 → R.CM.7.
- **Almost no spelling or grammar items. Writing prompts not directed to kinds of writing in grade-level objectives. No items R.CM.5-R.CM.7.**

B. For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?

- Fairly good balance here, I thought. Problematic genre items.
- Appears to be equity (writing components more in depth, balances out)

- **Good Balance.**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- Few spelling and pronoun items. No XX
- More on how
- **Problematic genre items. Ignores critical standards objective. Needs more "hows."**

D. *What is your general opinion of the alignment between the standards and assessment?*

- Needs slight improvement – less basic comprehension question would better meet the GLCE standards.
- **Fewer basic comprehension questions would better meet GLCE standards.**

E. *Other comments.*

- Writing component is very strong and well developed. *Rubrics before writing is a GREAT critical standard.
- Very well done and formatted
- **Strong writing components. Rubrics before writing were well received. Well formatted.**

Language Arts Grade 5
(Group summary comments in bold.)

A. *For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?*

- Almost no spelling or grammar items. Writing prompts were not directed to kinds of writing in Standards.
- Not addressed: R.CM.5 → R.CM.7.
- **Almost no spelling or grammar items. Writing prompts not directed to kinds of writing in grade level objectives. No items R.CM.5-R.CM.7.**

B. *For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?*

- Fairly good balance here, I thought. Problematic genre items.
- Appears to be equitable (writing components more in depth, balances out)
- **Good Balance**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- Few spelling and pronoun items. No contents.
- More on how.
- **Problematic genre items. Ignores critical standards objective. Needs more "hows"**

D. *What is your general opinion of the alignment between the standards and assessment?*

- Needs slight improvement – less basic comprehension question would better meet the GLCE standards.
- **Fewer basic comprehension questions would better meet GLCE standards.**

E. *Other comments.*

- Writing component is very strong and well developed. *Rubrics before writing is a GREAT critical standard.
- Very well done and formatted.
- **Strong writing components. Rubrics before writing were well received. Well formatted.**

Language Arts Grade 6
(Group summary comments in bold.)

A. *For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?*

- Pretty good. Better than at earlier levels.
- Items clustered around recall, inferencing, purpose, editing, compose, usage, etc. and vocabulary in informational narrative selections. (Fiction selection not done) historical
- **Better coverage at this grade level than in earlier ones. Insufficient attention to fictional texts.**

B. *For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?*

- Pretty good.
- Most were 2s, some 1s. Writing 3s.
- **Balance remains good. Mostly 2s, some 1s & 3s. Seems to be a growth over the years in depth of knowledge required.**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- OK.
- Fiction (?). No realistic fiction in entire grade level. Not all writing had planning sheet.
- **Fiction. Not all writing items provide for planning sheets.**

D. *What is your general opinion of the alignment between the standards and assessment?*

- Acceptable alignment
- Acceptable alignment (?)
- **Acceptable alignment**

E. *Other comments.*

- Shows some growth over time.
- Standards consistent. Writing a strength.
- **Reveals growth over time. Standards consistent. Writing a strength.**

Language Arts Grades 7–8
(Group summary comments in bold.)

A. *For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?*

- Yes.
- No real clear standards for peer writing response.
- Yes. Main idea, purpose, details, theme, author's craft, genre for reading process, editing, composing, etc. for writing.
- **Good coverage. No clear standards for peer writing response.**

B. *For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?*

- There needs to be duplicate standards for narrative and informational text, using the respect elements or sub features.
- Mostly 2s, more 3s than in previous grade levels.
- **Need to have duplicate standards for Nar. & inform text or group into one standard. Mostly 2s, more 3s than in previous levels.**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- N/A

- OK.
- **Poetry.**

D. *What is your general opinion of the alignment between the standards and assessment?*

- Acceptable alignment
- Acceptable alignment
- Acceptable alignment
- Acceptable alignment
- **Acceptable alignment**

E. *Other comments.*

- The writing prompt was not appropriate for all students. The lower socioeconomic class would be hard pressed to have any idea.
- We/I felt the questions for Hisako were difficult because of multiple questions with distractors. Reading selections and questions themselves were great!
- Question 51: "Balanced" Life, adults can always do this!
- Fewer "quality" fiction selections with "literary merit" – more personal narrative and information, and poetry.
- **Question 51 "Balanced" life, adults can always do this. Writing prompt not appropriate for all students—lower SE students would not have enough items. Reading selections great! Items for Hisako passage difficult because of multiple questions with distractors.**

Language Arts All Grades
(Group summary comments in bold.)

A. *For each standard, did the items cover the most important topics you expected by the standard? If not, what topics were not assessed that should have been?*

- **This improved from grade to grade—was quite good by grade 8.**

B. *For each standard, did the items cover the most important performance (DOK levels) you expected by the standard? If not, what performance was not assessed?*

- **Many2s. A few 1s. More3s from grade to grade. Some very challenging items grades 7-8.**

C. *Was there any content you expected to be assessed, but found no items assessing that content? What was that content?*

- **Could use writing items more geared to writing referred to in GLEs.**

D. What is your general opinion of the alignment between the standards and assessment?

- **Acceptable alignment.**

E. Other comments.

- **The biggest problem is that there is too much similarity or overlap among the benchmarks (GLCEs) within a standard. Makes it hard to assign items as different rates, choose different GLCEs. Frequently there are no good GLCEs to which to assign an item.**

Results from the reviewers' opinions of the overall alignment for each assessment by grade is given in Table 4. In general, reviewers felt that the alignment of the language arts assessments and standards was acceptable. This corresponds to the results from analyzing their codings.

Table 4
Average Reviewer Opinion on Overall Alignment of Assessments for Grades 3–8, Michigan Language Arts Curriculum Standards for Grades 2–7 (Question D)

Assessment	Avg. Response	Number of Reviewers
Grade 3	2.2	4
Grade 4	3	(Group Consensus)
Grade 5	3	(Group Consensus)
Grade 6	2	3
Grade 7	2	4
Grade 8	2	4

(The ratings are (1) Perfect alignment, (2) Acceptable alignment, (3) Needs slight improvement, (4) Needs major improvement, and (5) Not aligned in any way.)

Reliability Among Reviewers

The intraclass correlation among the language arts reviewers' assignment of DOK levels to items was high, ranging from .84 to .95 (Table 5). Reliabilities of over .80 are considered very good.

Table 5
Intraclass Correlation Among Reviewers in Assigning Item Depth-of-Knowledge Level for Language Arts

Grade	Intraclass Correlation	Number of Items	Number of Reviewers
3	0.95	37	12
4	0.94	45	12
5	0.91	45	12
6	0.91	45	12
7	0.86	45	12
8	0.84	45	12

Summary

The alignment between the assessments and the language arts standard at each grade was acceptable. The over-emphasis on one or two reading objectives on the assessment is not a critical alignment issue, since all of the other alignment criteria were fully met. The alignment between the assessments and the writing standard at each grade needs slight improvement. One to three more objectives for each grade needs to have at least one corresponding item for the assessments to fully meet the Range-of-Knowledge Correspondence criterion. Reviewers were very consistent in assigning items to standards, but showed less consistency in assigning items to specific grade-level expectations. This implies some overlap in content covered by the grade-level expectations, or lack of clarity in the written statements. Because reviewers found it difficult to distinguish among many of the objectives, this lowered the reviewer agreement on the precise objective measured by an item. The reviewers observed that the coverage of content on the assessments improved over the grades. Reviewers indicated there were some very challenging items on the grade 7 and grade 8 assessments.

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Appendix S.1:

Michigan Grades 2–7 Language Arts Standards and Group Consensus DOK Values

Table 3.12
Group Consensus
MI ELA Grade 2, Language Arts, Grade 2

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	2
R.CM.1	connect personal knowledge, experience, and understanding of others to ideas in texts through oral and written response	3
R.CM.2	retell the main idea(s) and relevant details of grade level appropriate narrative and informational text	2
R.CM.3	make text-to-self and text-to-text connections and comparisons	3
R.CM.4	compare and contrast relationships among characters, events, and key ideas within and across texts to create a deeper understanding	3
R.CM.5	map story elements across texts	2
R.CM.6	graphically represent key ideas and details across texts	2
R.CM.7	acquire and apply significant knowledge from what has been read in grade level appropriate science, social studies and mathematics texts	2
R.CS	Critical Standards	4
R.CS.1	develop and discuss shared standards	4
R.IT	Informational Text	2
R.IT.1	identify and describe a variety of informational genre including - simple how-to books, personal correspondence, science and social studies magazines	1
R.IT.2	discuss informational text patterns - sequential, enumerative	1
R.IT.3	explain how authors/illustrators use text features to enhance the understanding of key and supporting ideas - boldface type, graphs, maps, diagrams, charts	2
R.IT.4	respond to multiple texts read by discussing, illustrating, and/or writing to reflect, make connections, take a position, and share understanding	4
R.NT	Narrative Text	3
R.NT.1	discuss and describe the similarities of plot and character - in literature and other texts from around the world that have been recognized for quality and literary merit	3
R.NT.2	identify and describe a variety of genre including - poetry, fantasy, legends, drama	1
R.NT.3	identify and describe - characters' actions and motivations, setting (time and place), problem/solution, sequence of events	2
R.NT.4	identify and explain how authors/illustrators use literary devices - illustrations to depict major story events, title, comparisons (metaphor/simile) to reveal characters' thoughts and actions	3
R.NT.5	respond to multiple texts read by discussing, illustrating, and/or writing to reflect, make connections, take a position, and share understanding	4
R.WS	Word Recognition and Word Study	2
R.WS.1	use syntactic and semantic cues - reading context, picture clues, prefixes re-, un-, suffixes -s, -ed, -ingto determine the meaning of words in grade level appropriate texts	2
R.WS.2	know the meaning of words encountered frequently in grade 2 reading and oral language contexts (grade level vocabulary lists to be developed)	1
R.WS.3	determine the meaning of words and phrases (objects, actions, concepts, content, and English language arts vocabulary) in context using strategies and resources including context clues, mental pictures, questioning	2
W	Writing	2

Table 3.12
Group Consensus
MI ELA Grade 2, Language Arts, Grade 2

W.PR	Writing Process	2
W.PR.1	consider audience and purpose for writing	2
W.PR.2	develop a plan for their writing that may include graphic organizers that represent a specific organizational pattern (e.g., problem/solution, sequence, description, compare and contrast)	2
W.PR.3	write two paragraph clusters, each containing a main idea and some supporting details	3
W.PR.4	write in first and third person based on genre type and purpose	3
W.PR.5	narrow down a broader story idea to focus on only one aspect of the total idea	2
W.PR.6	use a sequenced organizational pattern with, grade level appropriate grammar, usage, mechanics, temporary spellings that reflect a close approximation of the sequence of sounds in the word	2
W.PR.7	use revision strategies to make stylistic changes in content and form to suit intended purpose and audience	3
W.PR.8	both individually and in groups, attempt to proofread and edit their writing using appropriate resources including dictionaries and a class-developed checklist	2
W.GN	Writing Genres	4
W.GN.1	write realistic fiction, fantasy, and/or a personal narrative that - depicts major story events, uses illustrations to match mood, contains setting, problem/solution, and sequenced events	4
W.GN.2	produce a magazine feature article using an organizational pattern such as - description, enumeration, sequence, compare/contrast, that may include graphs, diagrams, or charts to enhance the understanding of central and key ideas	4
W.HW	Handwriting	1
W.HW. 1	fluently and legibly write upper and lower case manuscript letters and begin to write the cursive alphabet	1
W.PS	Personal Style	3
W.PS.1	develop personal style in oral, written, and visual messages - narrative - descriptive language, use of imagination, varying sentence beginnings , informational – facts, effective conclusions	3
W.GR	Grammar and Usage	1
W.GR.1	correctly use complete and compound sentences, nouns and verbs, commas, contractions, colons to denote time, capitalization	1
W.SP	Spelling	1
W.SP.1	spell frequently encountered words (two-syllable words including common prefixes and suffixes, i.e., sitting) correctly. For less frequently encountered words, students will use structural cues (letter/sound, rimes), environmental sources (word walls, word lists)	1

Table 4.12
Group Consensus
MI ELA Grade 3, Language Arts, Grade 3

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	3
R.CM.1	connect personal knowledge, experience and understanding of the world to themes and perspectives in text through oral and written responses	3
R.CM.2	retell the story elements of grade level appropriate narrative text and major idea(s) of grade level appropriate informational text with relevant details	2
R.CM.3	compare and contrast (oral and written) relationships among characters, events, and key ideas within and across texts to create a deeper understanding (e.g., a narrative to an informational text, a literature selection to a subject area text, a literature selection to a subject area text, an historical event to a current event)	3
R.CM.4	apply significant knowledge from what is read in grade level appropriate science and social studies texts	2
R.CS	Critical Standards	3
R.CS.1	develop, discuss, and apply individual and shared standards, (e.g., student and class created rubrics), and begin to self-assess with teacher guidance the qualities of personal or other written text and the accuracy and quality of text	3
R.IT	Informational Text	2
R.IT.1	identify and describe a variety of informational genre (e.g., textbooks, encyclopedia, magazines)	1
R.IT.2	identify informational text patterns (e.g., problem/solution, sequence, compare/contrast, descriptive)	2
R.IT.3	explain how authors use titles, headings and subheadings, time lines, prefaces, indices, and table of contents to enhance understanding of supporting and key ideas	2
R.NT	Narrative Text	3
R.NT.1	explain how characters in literature and other texts express attitudes about one another in familiar classic and contemporary literature recognized for quality and literary merit	3
R.NT.2	identify and describe a variety of narrative genre (e.g., folktales, fables, realistic fiction)	1
R.NT.3	identify and describe characters' thoughts and motivations, story level themes (e.g., good vs. evil), main idea, and lesson/moral (e.g., fable) in narrative text	3
R.NT.4	explain how authors use literary devices (e.g., prediction, personification, point of view) to develop a story level theme, depict the setting, and reveal how thoughts and actions convey important character traits across a variety of text	3
R.WS	Word Recognition and Word Study	2
R.WS.1	use structural, semantic, and syntactic cues to automatically read frequently encountered words, decode unknown words, and decide meaning including multiple meaning words (e.g., letter/sound, rimes, base words, affixes)	2
R.WS.2	know the meanings of words encountered frequently in grade level reading and oral language contexts	1
R.WS.3	determine the meaning of words and phrases in context, (e.g., synonyms, homonyms, multiple meaning words) using strategies and resources (e.g., context clues, concept mapping, dictionary)	2
W	Writing	3
W.GN	Writing Genres	4

Table 4.12
Group Consensus
MI ELA Grade 3, Language Arts, Grade 3

W.GN.1	write a narrative piece (e.g., fable, folktale, or realistic fiction), using personification, setting, and actions and thoughts that reveal important character traits	3
W.GN.2	write a report demonstrating the understanding of central ideas and supporting details using an effective organizational pattern (e.g., problem/solution) with a title, heading, subheading, and a table of contents	4
W.PR	Writing Process	3
W.PR.1	set a purpose, consider audience, and replicate authors' styles and patterns when writing narrative or informational text	3
W.PR.2	apply a variety of pre-writing strategies for both narrative and informational text (e.g., graphic organizers such as story maps, webs, Venn diagrams) in order to generate, sequence, and structure ideas (e.g., sequence for beginning, middle, end; problem/ solution; compare/contrast)	2
W.PR.3	write sentences varying in patterns and length to slow down or speed up reading and create a mood when drafting a story.	3
W.PR.4	use the compare and contrast, cause and effect, or problem/solution organizational pattern in informational writing	2
W.PR.5	constructively and specifically respond orally to the writing of others by identifying sections of the text to improve sequence (e.g., arranging paragraphs, connecting main and supporting ideas, transitions)	3
W.PR.6	edit and proofread their writing using appropriate resources (e.g., dictionary, spell check, writing references) and grade level appropriate checklist both individually and in groups	2
W.PS	Personal Style	3
W.PS.1	exhibit individual style and voice to enhance the written message (e.g., in narrative text: varied word choice and sentence structure, character description; in informational text: examples, transitions, grammar usage)	3
W.GR	Grammar and Usage	1
W.GR.1	identify and use subjects and verbs that are in agreement; past, verb tenses; nouns and possessives; commas in a series; and begin use of quotations marks and capitalization in dialogue	1
W.SP	Spelling	1
W.SP.1	spell frequently encountered words (e.g., multi-syllabic, r-controlled, most consonant blends, contractions, compound, common homophones) correctly. For less frequently encountered words, students will use structural cues (e.g., letter/sound, rimes, morphemic) and environmental sources (e.g., word walls, word lists, dictionaries, spell checkers)	1

Table 5.12
Group Consensus
MI ELA Grade 4, Language Arts, Grade 4

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	3
R.CM.1	connect personal knowledge, experience, and understanding of the world to themes and perspectives in text through oral and written responses	3
R.CM.2	retell and summarize grade level appropriate narrative and informational text	2
R.CM.3	explain oral and written relationships among themes, ideas, and characters within and across texts to create a deeper understanding (e.g., categorize and classify, compare and contrast, draw parallels across time and culture)	3
R.CM.4	apply significant knowledge from what is read in grade level science and social studies texts	2
R.CS	Critical Standards	3
R.CS.1	develop, discuss, and apply individual and shared standards (e.g., student and class created rubrics), and begin to self-assess the quality, accuracy, and relevance of personal or other written text	3
R.IT	Informational Text	2
R.IT.1	identify and explain the defining characteristics of informational genre (e.g., autobiography/biography, personal essay, almanac, newspaper)	1
R.IT.2	identify and describe informational text patterns (e.g., compare/contrast, position/support, problem/solution)	2
R.IT.3	explain how authors use appendices, headings, subheadings, marginal notes, keys and legends, figures, and bibliographies to enhance understanding of supporting and key ideas	2
R.NT	Narrative Text	3
R.NT.1	describe and discuss the shared human experience depicted in classic and contemporary literature from around the world recognized for quality and literary merit	3
R.NT.2	identify and describe a variety of narrative genre (e.g., poetry, myths/legends, fantasy, adventure)	1
R.NT.3	analyze characters' thoughts and motivation through dialogue; various character roles and functions (e.g., hero, villain, narrator); know first person point of view and conflict/resolution	3
R.NT.4	explain how authors use literary devices (i.e., flash forward, flashback, simile) to depict time, setting, conflicts, and resolutions that enhance the plot and create suspense across a variety of texts	3
R.WS	Word Recognition and Word Study	2
R.WS.1	use structural, semantic, and syntactic cues to automatically read frequently encountered words, decode unknown words, and decide meaning, including multiple meaning words (e.g., letter/sound, rimes, base words, affixes, syllabication)	2
R.WS.2	know the meanings of words encountered frequently in grade level reading and oral language contexts	1
R.WS.3	determine the meaning of words and phrases in context (e.g., similes, metaphors, content vocabulary), using strategies and resources (e.g., context clues, semantic feature analysis, thesaurus)	2
W	Writing	3

Table 5.12
Group Consensus
MI ELA Grade 4, Language Arts, Grade 4

W.PR	Writing Process	3
W.PR.1	set a purpose, consider audience, and replicate authors' styles and patterns when writing narrative or informational text	3
W.PR.2	apply a variety of drafting strategies for both narrative and informational text (e.g., graphic organizers such as story maps, webs, Venn diagrams) in order to generate, sequence, and structure ideas (e.g., plot, connecting time, setting, conflicts, resolutions, definition/description, chronological sequence)	2
W.PR.3	use a variety of drafting techniques when writing an essay with connected, coherent, and mechanically sound paragraphs	3
W.PR.4	constructively and specifically respond orally to the writing of others by identifying sections of the text to improve organization (e.g., rearranging paragraphs and/or sequence, relating main and supporting ideas, using comparative transitions)	3
W.PR.5	edit and proofread their writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups	2
W.GN	Writing Genres	3
W.GN.1	write a narrative piece (e.g., myth/legend, fantasy, adventure) creating relationships among setting, characters, theme, and plot	3
W.GN.2	write a comparative piece to demonstrating [e] understanding of central ideas and supporting ideas using an effective organizational pattern (e.g., compare and contrast) and a boldface and/or italicized print	3
W.HW	Handwriting	1
W.HW. 1	write neatly and legibly	1
W.SP	Spelling	1
W.SP.1	spell frequently encountered words (e.g., roots, inflections, prefixes, suffixes, multi-syllabic) correctly. For less frequently encountered words, students will use structural cues (e.g., letter/sound, rimes, morphemic) and environmental sources (e.g., word walls, word lists, dictionaries, spell checkers)	1
W.ST	Personal Style	3
W.ST.1	exhibit individual style and voice to enhance the written message (e.g., in narrative text: strong verbs, figurative language, sensory images; in informational text: precision, established importance, transitions)	3
W.GR	Grammar and Usage	1
W.GR.1	use simple and compound sentences, direct and indirect objects, prepositional phrases, adjectives, common and proper nouns as subjects and objects, pronouns as antecedents, regular and irregular verbs; use hyphens between syllables, apostrophes	1

Table 6.12
Group Consensus
MI ELA Grade 5, Language Arts, Grade 5

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	3
R.CM.1	connect personal knowledge, experience and understanding of the world to themes and perspectives in text through oral and written responses	3
R.CM.2	retell and summarize grade level appropriate narrative and informational text	2
R.CM.3	analyze oral and written global themes, universal truths, themes and principles within and across text to create a deeper understanding, (e.g., draw conclusions, make inferences, synthesize)	3
R.CM.4	apply significant knowledge from what is read in grade level science and social studies text	2
R.CS	Critical Standards	3
R.CS.1	develop, discuss, and apply individual and shared standards (e.g., student- and class - created rubrics) to assess or self-assess the qualities of personal or other written text to identify attainment of intended purpose, to interpret authors' viewpoints, and to determine effect on classroom or school-wide-audiences	3
R.IT	Informational Text	2
R.IT.1	analyze elements and style of informational genres (e.g., advertising, experiments, editorials, atlases)	2
R.IT.2	identify and describe informational text patterns (e.g., theory and evidence, compare/contrast, position/support, problem/solution)	2
R.IT.3	explain how authors use time lines, graphs, charts, diagrams, tables of contents, indices, introductions, summaries, and conclusions to enhance understanding of supporting and key ideas	2
R.NT	Narrative Text	3
R.NT.1	analyze how characters and communities reflect life (in positive and negative ways) in classic and contemporary literature recognized for quality and literary merit	3
R.NT.2	analyze elements and style of narrative genres (e.g., historical fiction, tall tales, science fiction, fantasy, mystery)	2
R.NT.3	analyze character traits and setting and how it defines characters/plot, the role of dialogue, how problems are resolved, and the climax of a plot	2
R.NT.4	explain how authors use literary devices (e.g., exaggeration, metaphor) to develop characters, themes, plot, and functions of heroes, villains, and narrator across a variety of texts	3
R.WS	Word Recognition and Word Study	2
R.WS.1	use structural, semantic, and syntactic cues to automatically read frequently encountered words, decode unknown words, and decide meaning including multiple meaning words (e.g., letter/sound, rimes, base words, affixes, syllabication)	2
R.WS.2	know the meanings of words encountered frequently in grade level reading and oral language contexts	1
R.WS.3	determine the meaning of words and phrases in context (e.g., symbols, idioms, recently-coined words) using strategies and resources (e.g., analogies, content glossaries, electronic resources)	2
W	Writing	3

Table 6.12
Group Consensus
MI ELA Grade 5, Language Arts, Grade 5

W.PR	Writing Process	3
W.PR.1	set a purpose, consider audience, and replicate authors' styles and patterns when writing narrative or informational text	3
W.PR.2	use a variety of drafting strategies for both narrative and informational text (e.g., graphic organizers such as story maps, webs, and Venn diagrams) in order to generate, sequence, and structure ideas (e.g. role and relationships of characters, settings, ideas; relationship of theory and evidence, compare/contrast)	2
W.PR.3	use linguistic structures and textual features needed to clearly communicate ideas and information in written text with connected, coherent, mechanically sound paragraphs	3
W.PR.4	constructively and specifically respond orally to the writing of others by identifying sections of the text to improve organization (e.g., position/evidence, flow of ideas, and craft such as titles, leads, endings, and powerful verbs)	3
W.PR.5	independently and collaboratively edit and proofread writing using grade level checklists	2
W.GN	Writing Genres	4
W.GN.1	write a narrative piece (e.g., mystery, tall tale, historical fiction), using time period and setting to enhance the plot; demonstrating roles and functions of heroes, villains, and narrator; and depicting conflicts and resolutions	4
W.GN.2	write a position piece to demonstrating [e] understanding of central ideas and supporting details (e.g., position/evidence organizational pattern) using multiple headings and subheadings	4
W.HW	Handwriting	1
W.HW. 1	write neatly and legibly	1
W.PS	Personal Style	3
W.PS.1	exhibit individual style and voice to enhance the written message (e.g., in narrative text: personification, humor, element of surprise; in informational text: emotional appeal, strong opinion, credible support)	3
W.GR	Grammar and Usage	2
W.GR.1	identify and use compound subjects and predicates, proper nouns and pronouns, articles, conjunctions, hyphens in compound and number words, commas between two independent clauses to set off direct address/long phrases/clauses, colons to separate hours, and minutes and to introduce a list	2
W.SP	Spelling	1
W.SP.1	spell frequently encountered words (e.g., roots, inflections, prefixes, suffixes, multi-syllabic) correctly. For less frequently encountered words, students will use structural cues (e.g., letter/sound, rimes, morphemic) and environmental sources (e.g., word walls, word lists, dictionaries, spell checkers)	1

Table 7.12
Group Consensus
MI ELA Grade 6, Language Arts, Grade 6

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	3
R.CM.1	connect personal knowledge, experience, and understanding of the world to themes and perspectives in the text	3
R.CM.2	read, retell and summarize grade level appropriate narrative and informational texts of grade level appropriate informational text	2
R.CM.3	state global themes, universal truths, and principles within and across texts to create a deeper understanding	3
R.CM.4	apply significant knowledge from what has been read in grade level appropriate science and social studies texts	2
R.CS	Critical Standards	3
R.CS.1	compare the appropriateness of shared, individual, and expert standards based on purpose, context, and audience in order to assess their own work and work of others	3
R.IT	Informational Text	2
R.IT.1	analyze elements and style of informational genre (e.g., research report, how-to-articles, essays)	2
R.IT.2	analyze organizational patterns	2
R.IT.3	explain how authors use text features to enhance the understanding of central, key, and supporting ideas (e.g., footnotes, bibliographies, introductions, summaries, conclusions, appendices)	2
R.NT	Narrative Text	3
R.NT.1	describe how characters in classic and contemporary literature recognized for quality and literary merit form opinions about one another in ways that can be fair and unfair	2
R.NT.2	analyze elements and style of narrative genres (e.g., folktales, fantasy, adventure, action)	2
R.NT.3	analyze the role of dialogue, plot, characters, themes, major and minor characters, and climax	3
R.NT.4	analyze how authors use dialogue, imagery, and understatement to develop plot	3
R.WS	Word Recognition and Word Study	2
R.WS.1	use word structure, sentence structure, and prediction to aid in decoding and understanding the meanings of words encountered in context	2
R.WS.2	use structural, syntactic, and semantic analysis to recognize unfamiliar words in context (e.g., origins and meanings of foreign words, words with multiple meanings, knowledge of major word chunks/rimes, syllabication)	2
R.WS.3	know the meaning of frequently encountered words in written and oral contexts (research to support specific words)	1
R.WS.4	use strategies (e.g., connotation, denotation) and authentic content-related resources to determine the meaning of words and phrases in context (e.g., regional idioms, content area vocabulary, technical terms)	2
W	Writing	3
W.PR	Writing Process	3
W.PR.1	set a purpose, consider audience, and replicate authors' styles and patterns when writing narrative or informational text	3
W.PR.2	apply a variety of pre-writing strategies for both narrative (e.g., graphic organizers such	3

Table 7.12
Group Consensus
MI ELA Grade 6, Language Arts, Grade 6

	as story maps or webs designed to develop a plot that includes major and minor characters, builds climax, and uses dialogue to enhance a theme) and informational text (e.g., position statement and supporting evidence, problem statement and solution, compare/contrast)	
W.PR.3	review and revise their drafts with audience and purpose in mind regarding consistent voice and genre characteristics	2
W.PR.4	write for a specific purpose by using multiple paragraphs, sentence variety, and voice to meet the needs of an audience (e.g. word choice, level of formality, example)	3
W.PR.5	edit their writing using proofreaders' checklists both individually and in peer editing groups	1
W.GN	Writing Genres	4
W.GN.1	write a cohesive narrative piece (e.g., personal narrative, adventure, tall tale, folk tale, fantasy) that includes elements of characterization for major and minor characters, internal and/or external conflict, and address issues of plot, theme, and imagery	4
W.GN.2	write an essay (e.g., personal, persuasive, or comparative) for authentic audiences that includ es [es] organizational patterns that support key ideas	3
W.HW	Handwriting	1
W.HW. 1	Write legibly in their compositions	1
W.PS	Personal Style	3
W.PS.1	exhibit individual style to enhance the written message (e.g., in narrative text: personification, humor, element of surprise; in informational text: emotional appeal, strong opinion, credible support)	3
W.GR	Grammar and Usage	2
W.GR.1	Use style conventions (e.g., MLA) and a variety of grammatical structures in their writing including indefinite and predicate pronouns, transitive and intransitive verbs, adjective and adverb phrases, adjective and adverb subordinate clauses, comparative adverbs and adjectives, superlatives, conjunctions, compound sentences, appositives, independent and dependent clauses, introductory phrases, periods, commas, quotation marks, and the uses of underlining and italics for specific purposes	2
W.SP	Spelling	1
W.SP.1	spell frequently misspelled words correctly (e.g., their, there, they're) in the context of their own writing	1

Table 7.12
Group Consensus
MI ELA Grade 6, Language Arts, Grade 6

Level	Description	DOK
R	Reading	2
R.CM	Comprehension	3
R.CM.1	connect personal knowledge, experience, and understanding of the world to themes and perspectives in the text	3
R.CM.2	read, retell, and summarize grade level appropriate narrative and informational texts	2
R.CM.3	state global themes, universal truths, and principles within and across texts to create a deeper understanding	3
R.CM.4	apply significant knowledge from what has been read in grade level appropriate science and social studies texts	2
R.CS	Critical Standards	3
R.CS.1	analyze the appropriateness of shared, individual, and expert standards based on purpose, context, and audience in order to assess their own work and work of others	3
R.IT	Informational Text	2
R.IT.1	analyze elements and style of informational genre (e.g., persuasive essay, research report, brochure, personal correspondence, autobiography/biography)	2
R.IT.2	analyze organizational patterns (e.g., compare/contrast, cause and effect, sequence)	2
R.IT.3	explain how authors use writer's craft and text features to enhance the understanding of central, key, and supporting ideas (e.g., metaphors, similes, captions, diagrams, appendices)	2
R.NT	Narrative Text	3
R.NT.1	identify and discuss how the tensions among characters, communities, themes, and issues in classic and contemporary literature recognized for quality and literary merit are related to their own experiences	2
R.NT.2	analyze elements and style of narrative genres (e.g., mystery, poetry, memoir, drama, myths, legends)	2
R.NT.3	analyze the role of antagonists, protagonists, internal and external conflicts, and abstract themes	3
R.NT.4	analyze author's craft (e.g., theme, antagonists, protagonists, over and understatement, exaggeration)	3
R.WS	Word Recognition and Word Study	2
R.WS.1	use word structure, sentence structure, and prediction to aid in decoding and understanding the meanings of words encountered in context	2
R.WS.2	use structural, syntactic, and semantic analysis to recognize unfamiliar words in context (e.g., idioms, analogies, metaphors, similes, knowledge of roots and affixes, major word chunks/rimes, syllabication)	2
R.WS.3	know the meaning of frequently encountered words in written and oral contexts (research to support specific words)	1
R.WS.4	use strategies and authentic content-related resources to determine the meaning of words and phrases in context (e.g., literary terms, cross-cultural words and phrases, mathematical expressions, scientific procedures)	2
W	Writing	3
W.PR	Writing Process	3
W.PR.1	set a purpose, consider audience, and replicate authors' styles and patterns when writing	3

Table 7.12
Group Consensus
MI ELA Grade 6, Language Arts, Grade 6

	narrative or informational text	
W.PR.2	apply a variety of pre-writing strategies for narrative (e.g., story maps that are designed to depict roles of antagonist and protagonist, internal and external conflict) and informational text (e.g., position statement and supporting evidence, problem statement and solution, compare/contrast)	3
W.PR.3	revise their writing to reflect different perspectives for multiple purposes	3
W.PR.4	select and use titles, leads, and endings to achieve a specific purpose for specific audiences. (revise writing to ensure that content, structure, elements of style and voice, literary devices, and textual features are consistent)	3
W.PR.5	edit their writing using proofreaders' checklists both individually and in peer editing groups	1
W.GN	Writing Genres	4
W.GN.1	write a cohesive narrative piece that includes appropriate conventions to the genre(e.g., memoir, drama, legend, mystery, poetry, myth) and employ literary and plot devices (e.g., internal and/or external conflicts, antagonists/protagonists, personification)	4
W.GN.2	write a research report (e.g., I-search, website, traditional) for an authentic audience that including [es] appropriate organizational patterns (e.g., problem statement and solution, position statement and supporting evidence, compare and contrast), descriptive language, and text features	4
W.HW	Handwriting	1
W.HW. 1	be legible in their compositions	1
W.SP	Spelling	1
W.SP.1	correctly spell the derivatives of bases and affixes in the context of their own writing	1
W.ST	Personal Style	3
W.ST.1	exhibit individual style to enhance the written message (e.g., in narrative text: personification, humor, element of surprise; in informational text: emotional appeal, strong opinion, credible support)	3
W.GR	Grammar and Usage	2
W.GR.1	in the context of their writing, use style conventions (e.g., MLA) and a variety of grammatical structures in their writing including participial phrases, adverbial subordinate clauses, superlative adjectives and adverbs, present/past/future, continuous verb tenses, parentheses, singular and plural possessive forms, and indefinite pronouns	2

Appendix S.2

Data Analysis Tables

Michigan Language Arts
Grades 3, 4, 5, 6, 7, and 8

Brief Explanation of Data in the Alignment Tables by Column

Tables (Grade).1

Goals #	Number of objectives plus one for a generic objective for each standard.
Objectives #	Average number of objectives for reviewers. If the number is greater than the actual number in the standard, then at least one reviewer coded an item for the goal/objective but did not find any objective in the goal that corresponded to the item.
Level	The Depth-of-Knowledge level coded by the reviewers for the objectives for each standard.
# of objectives by Level	The number of objectives coded at each level
% w/in std by Level	The percent of objectives coded at each level
Hits Mean & SD	Mean and standard deviation number of items reviewers coded as corresponding to standard. The total is the total number of coded hits.
Cat. Conc. Accept.	"Yes" indicates that the standard met the acceptable level for criterion. "Yes" if mean is six or more. "Weak" if mean is five to six. "No" if mean is less than five.

Tables (Grade).2

First five columns repeat columns from Table 1.

Level of Item w.r.t. Stand	Mean percent and standard deviation of items coded as "under" the Depth-of-Knowledge level of the corresponding objective, as "at" (the same) the Depth-of-Knowledge level of the corresponding objective, and as "above" the Depth-of-Knowledge level of the corresponding objective.
Depth-of-Know. Consistency Accept.	"Yes" indicates that 50% or more of the items were rated as "at" or "above" the Depth-of-Knowledge level of the corresponding objectives. "Weak" indicates that 40% to 50% of the items were rated as "at" or "above" the Depth-of-Knowledge level of the corresponding objectives. "No" indicates that less than 40% items were rated as "at" or "above" the Depth-of-Knowledge level of the corresponding objectives.

Tables (Grade).3

First five columns repeat columns from Table 1 and 2.

Range of Objectives	
# Objectives Hit	Average number and standard deviation of the objectives hit coded by reviewers.
% of Total	Average percent and standard deviation of the total objectives that had at least one item coded.
Range of Know.	
Accept.	"Yes" indicates that 50% or more of the objectives had at least one coded objective. "Weak" indicates that 40% to 50% of the objectives had at least one coded objective. "No" indicates that 40% or less of the objectives had at least one coded objective.
Balance Index	
% Hits in Std/Ttl Hits	Average and standard deviation of the percent of the items hit for a standard of total number of hits (see total under the Hits column).
Index	Average and standard deviation of the Balance Index.

Note: BALANCE INDEX $1 - (\sum_{k=1} \left| 1/(O) - I_{(k)}/(H) \right|)/2$

Where O = Total number of objectives hit for the standard

$I_{(k)}$ = Number of items hit corresponding to objective (k)

H = Total number of items hit for the standard

Bal. of Rep Accept.	"Yes" indicates that the Balance Index was .7 or above (items evenly distributed among objectives). "Weak" indicates that the Balance Index was .6 to .7 (a high percentage of items coded as corresponding to two or three objectives). "No" indicates that the Balance Index was .6 or less (a high percentage of items coded as corresponding to one objective.)

Tables (Grade).4

Summary if standard met the acceptable level for the four criteria by each standard.

Tables (Grade).5

Comments made by reviewers on items identified as having a source of challenge issue by item number.

Tables (Grade).6

The DOK value for each assessment item given by each reviewer. The intraclass correlation for the group of reviewers is given on the last row.

Tables (Grade).7

All notes made by reviewers on items by item number.

Tables (Grade).8

The DOK level and objective code assigned by each reviewer for each item.

Tables (Grade).9

This list for each item all of the objectives coded by the eight reviewers as corresponding to the item. Repeat of an objective indicates the number of reviewers who coded that objective as corresponding to the item.

Tables (Grade).10

This lists for each objective all of the items coded by the eight reviewers as corresponding to the objective. Repeat of an item indicates the number of reviewers who coded the item as corresponding to the objective.

Tables (Grade).11

This table summarizes the number of reviewers who coded an item as corresponding to an objective. It contains the same information as in Table 10.

Tables (Grade).12

This table does not appear here, but in Appendix A. It shows the DOK levels determined by the consensus process assigned to each objective.

Tables (Grade).13

This table can be used to compare the DOK level of an objective to the average DOK level of the items reviewers assigned to the objective. This table is helpful to identify items with a lower DOK level that should be replaced by an item with a higher DOK level to improve the Depth-of-Knowledge Consistency.

Table 3.1
Categorical Concurrence Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 3 Language Arts
Number of Assessment Items - 37

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	20.5	1 2 3 4	4 8 5 3	20 40 25 15	30.17	0.99	YES
W - Writing	6	14.25	1 2 3 4	3 5 4 2	21 35 28 14	8.08	1.50	YES
Total	11	34.75	1 2 3 4	7 13 9 5	20 38 26 14	38.25	1.42	

Table 3.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 3 Language Arts
Number of Assessment Items - 37

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	20.5	30.17	0.99	40	43	51	43	9	24	YES
W - Writing	6	14.25	8.08	1.50	17	36	59	48	23	42	YES
Total	11	34.75	38.25	1.42	35	43	53	44	13	30	

Table 3.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Twelve Reviewers

Michigan Grade 3 Language Arts

Number of Assessment Items - 37

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	20.5	30.17	0.99	11.67	2.25	57	10	YES	79	3	0.69	0.02	WEAK
W - Writing	6	14.25	8.08	1.50	3.83	0.90	27	6	NO	21	3	0.69	0.07	WEAK
Total	11	34.75	38.25	1.42	7.75	4.27	42	17		50	29	0.69	0.05	

Table 3.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Twelve Reviewers
Michigan Grade 3 Language Arts
Number of Assessment Items - 37

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	NO	WEAK

Table 3.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 3 Language Arts

Item Number	Comments by Reviewer

Table 3.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 3 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9	Rater 10	Rater 11	Rater 12
1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	2	1	1	1	1	2
3	1	1	1	2	2	1	1	2	1	2	2	1
4	2	2	2	2	2	2	1	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2	2
6	2	2	2	2	2	2	2	2	2	2	3	2
7	2	2	2	3	3	3	3	3	3	2	3	2
8	2	2	2	3	2	2	2	3	3	3	3	3
9	2	1	1	2	1	2	2	1	2	1	1	1
10	3	2	2	2	1	3	3	2	2	2	2	2
11	1	1	1	1	1	2	1	1	1	1	2	1
12	3	2	2	2	2	1	2	2	2	1	2	1
13	1	1	1	1	1	1	2	1	2	1	1	2
14	2	3	2	3	2	3	3	2	2	2	3	3
15	2	1	1	1	1	2	3	2	2	2	1	1
16	1	2	2	2	2	2	3	2	2	2	2	3
17	2	1	3	3	2	2	2	2	3	2	2	3
18	3	2	1	3	3	2	2	2	3	2	2	1
19	1	2	1	3	3	2	2	2	3	2	2	2
20	3	2	3	3	2	3	3	3	3	2	2	3
21	1	2	2	2	1	1	1	2	1	2	1	2
22	3	2	3	3	4	3	3	4	3	4	4	3
23	2	2	2	2	1	1	1	1	3	2	2	2
24	1	1	1	1	1	1	1	1	1	1	1	1
25	2	1	1	1	1	1	1	1	1	1	1	3
26	1	1	1	1	1	1	1	1	1	1	1	1
27	1	2	2	1	2	2	3	2	2	2	2	1
28	1	1	1	2	1	1	2	1	2	1	1	2
29	1	1	1	1	1	1	1	1	2	1	1	3
30	1	1	1	1	1	1	1	1	2	1	1	3
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												
42												
43	3	3	3	3	3	3	3	2	3	4	3	3
44	1	1	1	1	1	1	1	1	3	1	2	1
45	1	1	1	1	1	1	1	1	1	1	1	2
46	1	1	1	1	1	1	1	1	2	1	2	2
47	1	1	1	1	1	1	1	1	2	1	2	2

Table 3.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 3 Language Arts

48	1	1	1	1	1	1	1	1	2	1	1	2
49	3	2	3	3	3	3	2	2	3	3	3	3

Intraclass Correlation: 0.9503
Pairwise Comparison: 0.6069

Table 3.7
Notes by Reviewer
Michigan Grade 3 Language Arts

Item Number	Comments by Reviewer
14	Could be two correct answers as stem uses the term "might" leaving open the possibility of two correct answers.
15	do have to make some connections between picture and text but still a rather basic item.
27	There needs to be an objective that states "authors purpose".
27	There is no objective for author's purpose as past of R.CM, R.NT, or R.IT. An objective needs to be added under comprehension.
28	children may be taught that a story is fiction and a "report" is non-fiction. Using the word story to describe a non-fiction selection is confusing.
45	Need a specific objective under writing for mecn\hanics
49	No specific statement appears to address creating a title.

Table 3.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 3 Language Arts

Item	DOK0	PObj0	S1Obj0	S2Obj0	DOK1	PObj1	S1Obj1	S2Obj1	DOK2	PObj2	S1Obj2	S2Obj2	DOK3	PObj3	S1Obj3	DOK4	PObj4	DOK5	PObj5	S1Obj5	DOK6	PObj6	DOK7	PObj7	DOK8	PObj8	S1Obj8	DOK9	PObj9	S1Obj9	DOK10	PObj10	DOK11	PObj11
1	1	R.WS.2			1	R.WS.2			1	R.WS.2			1	R.WS.2		1	R.WS.2	1	R.WS.2		1	R.WS.2	1	R.WS.2	1	R.WS.2		1	R.WS.2		1	R.WS.2	1	R.WS.1
2	1	R.NT.3			1	R.NT.3			1	R.NT.3			1	R.NT.3		1	R.CM.2	1	R.NT.3		2	R.NT.3	1	R.NT.3	1	R.NT.3		1	R.NT.3		1	R.NT.3	2	R.NT.3
3	1	R.NT.3			1	R.NT.3			1	R.NT.3			2	R.WS.3		2	R.NT.3	1	R.NT.3		1	R.NT.3	2	R.NT.3	1	R.NT.3		2	R.NT.3		2	R.NT.3	1	R.NT.3
4	2	R.NT.3			2	R.NT.3			2	R.NT.3			2	R.IT.4	R.NT.3	2	R.NT.3	2	R.NT		1	R.NT.3	2	R.NT.3	2	R.NT.3		2	R.NT.3		2	R.NT.3	2	R.NT.3
5	2	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2		2	R.CM.2	2	R.CM.2		2	R.CM.2	2	R.CM.2	2	R.CM.2		2	R.CM.2		2	R.CM.2	2	R.CM.2
6	2	R.NT.3			2	R.NT.3			2	R.NT.3			2	R.NT.3		2	R.NT.3	2	R.NT.2		2	R.NT.3	2	R.NT.3	2	R.NT.3		2	R.NT.3		3	R.NT.3	2	R.NT.3
7	2	R.NT.3			2	R.NT.3			2	R.NT.3			3	R.NT.3		3	R.NT.3	3	R.NT.3		3	R.NT.3	3	R.NT.3	3	R.NT.3		2	R.NT.3		3	R.NT.3	2	R.NT.3
8	2	R.CM.2			2	R.CM.2			2	R.CM.2			3	R.CM.4		2	R.CM.1	2	R.CM.2		2	R.CM.2	3	R.CM.2	3	R.CM.2		3	R.CM.2		3	R.CM.2	3	R.CM.2
9	2	R.WS.3			1	R.WS.2			1	R.WS.3			2	R.WS.3		1	R.WS.3	2	R.WS.1		2	R.WS.3	1	R.WS.2	2	R.WS.3		1	R.WS.3		1	R.WS.2	1	R.WS.2
10	3	R.NT.3			2	R.NT.3			2	R.CM.2			2	R.WS.3		1	R.NT.4	3	R.CM.1		3	R.NT.4	2	R.NT.4	2	R.CM.3	R.CM.1	2	R.CM.3		2	R.NT.3	2	R.NT.3
11	1	R.NT.3			1	R.NT.3			1	R.CM.2			1	R.CM.2		1	R.NT.3	2	R.CM.2		1	R.CM.2	1	R.CM.2	1	R.NT.3		1	R.CM.2		2	R.WS.3	1	R.NT.4
12	3	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2		2	R.CM.2	1	R.CM.2		2	R.CM.2	2	R.CM.2	2	R.CM.2		1	R.CM.2		2	R.CM.2	1	R.NT.4
13	1	R.NT.2			1	R.NT.2			1	R.NT.2			1	R.NT.2		1	R.NT.2	1	R.NT.2		2	R.CM.2	1	R.NT.2	2	R.NT.1		1	R.NT.2		1	R.NT.2	2	R.NT.2
14	2	R.CM.1			3	R.CM.2			2	R.NT.4			3	R.NT.4		2	R.CM.1	3	R.NT.4		3	R.NT.4	2	W.PR.1	2	R.CM.2		2	R.NT.4		3	R.NT.4	3	R.NT.4
15	2	R.NT.4			1	R.WS.2			1	R.NT.4			1	R.WS.2		1	R.NT.4	2	R.NT.4		3	R.WS.3	2	R.WS.3	2	R.WS.3		2	R.NT.4		1	R.WS.1	1	R.WS.3
16	1	R.CM.1			2	R.NT.3			2	R.NT			2	R.WS.3		2	R.NT.3	2	R.WS.3		3	R.WS.3	2	R.NT.3	2	R.WS.3		2	R.NT.4		2	R.WS.3	3	R.CM.3
17	2	R.CM.3			1	R.CM.4			3	R.CM.3			3	R.CM.4		2	R.CM.4	2	R.CM.3		2	R.CM.3	2	R.CM.4	3	R.CM.4		2	R.CM.4		2	R.CM.3	3	R.NT.5
18	3	R.CM.3			2	R.CM.4			1	R.CM.3			3	R.CM.4		3	R.CM.4	2	R.CM.3		2	R.CM.3	2	R.CM.4	3	R.CM.4		2	R.CM.4		2	R.CM.3	1	R.NT.4
19	1	R.CM.3			2	R.CM.4			1	R.CM.3			3	R.CM.4		3	R.CM.4	2	R.CM.3		2	R.CM.3	2	R.CM.4	3	R.CM.4		2	R.CM.4		2	R.CM.4	2	R.NT.2
20	3	R.CM.3			2	R.CM.4			3	R.CM.4			3	R.CM.4		2	R.CM.1	3	R.CM.4		3	R.CM.4	3	R.CM.4	3	R.NT.5		2	R.CM.4		2	R.CM.4	3	R.CM.4
21	1	R.IT.1			2	R.CM.4			2	R.IT.1			2	R.IT.1		1	R.IT.1	1	R.IT	R.NT.2	1	R.IT.1	2	R.CM.1	1	R.IT.1		2	R.IT.1		1	R.IT.1	2	R.IT.1

Table 3.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 3 Language Arts

22	3	R.CM.4			2	W.PR.6			3	W.PR	R.NT.5		3	W.GN.2	W.PR.4	4	R.NT.5	3	R.NT.5		3	R.NT.5	4	R.NT.5	3	R.NT.5		4	R.NT.5		4	R.NT.5	3	W.GN.1
23	2	R.NT.3			2	R.CM.2			2	R.IT			2	R.IT.3		1	R.CM.2	1	R.CM.2		1	R.CM.2	1	R.CM.2	3	R.CM.1		2	R.CM.1		2	R.CM.2	2	R.IT.4
24	1	R.NT.3			1	R.NT.3	R.WS.2		1	R.CM.2			1	R.CM.2		1	R.CM.2	1	R.CM.2		1	R.CM.2	1	R.WS.2	1	R.WS.2		1	R.CM.2		1	R.CM.2	1	R.IT.4
25	2	R.IT.3			1	R.NT.3			1	R.IT.3			1	R.CM.3		1	R.IT.3	1	R.IT.3		1	R.CM.2	1	R.IT.3	1	R.CM.2		1	R.CM.2		1	R.CM.2	3	R.IT.4
26	1	R.NT.3			1	R.NT.3			1	R.IT			1	R.CM.2		1	R.CM.2	1	R.CM.2		1	R.CM.2	1	R.CM.2	1	R.CM.2		1	R.CM.2		1	R.CM.2	1	R.CM.2
27	1	R.CM.1			2	R.CM.2			2	R.IT			1	R.IT.3		2	R.CM.1	2	R.IT		3	R	2	W.PR.1	2	R.CM.2		2	R.IT.3		2	R.CM	1	R.IT.4
28	1	R.IT.1			1	R.IT.1			1	R.IT.1			2	R.IT.2		1	R.IT.1	1	R.IT.1		2	R.IT.1	1	R.NT.2	2	R.IT.2		1	R.IT.1		1	R.IT.1	2	R.IT.3
29	1	R.IT.3			1	R.CM.2			1	R.IT.3			1	R.IT.3		1	R.IT.3	1	R.IT.3		1	R.IT.3	1	R.IT.3	2	R.CM.2		1	R.IT.3		1	R.IT.3	3	R.CM.7
30	1	R.NT.3			1	R.CM.2			1	R.IT			1	R.IT.3		1	R.CM.2	1	R.IT.3		1	R.CM.2	1	R.CM.2	2	R.CM.2		1	R.IT.3		1	R.CM.2	3	R.CM.7
31																																		
32																																		
33																																		
34																																		
35																																		
36																																		
37																																		
38																																		
39																																		
40																																		
41																																		
42																																		
43	3	W.PR.6	W.PR.7	W.PR.8	3	W.GN.1			3	W.PR	W.PR.8	W.PR.1	3	W.PR.3		3	W.PR.1	3	W.PR.3	W.PR.6	3	W.PR.3	2	W.GN.1	3	W.GN.1		4	W.GN.1	W.PR.4	3	W.PR.2	3	W.PR.4
44	1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.SP.1		1	W.SP.1	1	W.GR.1		1	W.PR.8	1	W.PR.6	3	W.GR.1		1	W.GR.1		2	W.PR.6	1	W.PR.4
45	1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		1	W.GR.1	1	W.GR.1		1	W.PR.8	1	W.PR.6	1	W.GR.1		1	W.GR.1		1	W.PR.6	2	W.PR.8
46	1	W.GR.1	W.SP.1		1	W.GR.1			1	W.GR.1			1	W.GR.1		1	W.GR.1	1	W.GR.1		1	W.PR.8	1	W.PR.6	2	W.GR.1		1	W.GR.1		2	W.PR.6	2	W.PR.8
47	1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		1	W.GR.1	1	W.GR.1		1	W.PR.8	1	W.GR.1	2	W.GR.1		1	W.GR.1		2	R.CM.6	2	W.PR.8
48	1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		1	W.GR.1	1	W.GR.1		1	W.PR.8	1	W.PR.6	2	W.GR.1		1	W.GR.1		1	W.PR.6	2	W.PR.8
49	3	W.PR.6	W.PR.7		2	W.PR			3	W.PR	W.PR.8		3	R.NT.4		3	W.PR.7	3	R.CM.4		2	W.PR.5	2	W.PR	3	W.PR.7		3	W.PR.7		3	W.PR.2	3	W.PR.5

Table 3.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 3 Language Arts

Pairwise Comparison: 0.4783
Standard Pairwise Comparison: 0.9662

Table 3.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 3 Language Arts

Low		Medium		High
0		9.367347		18

1	R.W S.1	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.2
	R.W S.2	R.W S.2								
2	R.C M.2	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.N T.3								
3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.W S.3								
4	R.IT .4	R.N T	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.N T.3	R.N T.3							
5	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
6	R.N T.2	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.N T.3								
7	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.N T.3								
8	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.4								
9	R.W S.1	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.3	R.W S.3	R.W S.3	R.W S.3	R.W S.3
	R.W S.3	R.W S.3								
10	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.4
	R.N	R.N	R.W							

Table 3.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 3 Language Arts

	T.4	T.4	S.3							
11	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.NT.3	R.NT.3	R.NT.3	R.NT.3
	R.NT.4	R.WS.3								
12	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.NT.4								
13	R.CM.2	R.NT.1	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2
	R.NT.2	R.NT.2								
14	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	W.PR.1								
15	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.WS.1	R.WS.2	R.WS.2	R.WS.3	R.WS.3
	R.WS.3	R.WS.3								
16	R.CM.1	R.CM.3	R.NT	R.NT.3	R.NT.3	R.NT.3	R.NT.4	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	R.WS.3								
17	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4
	R.CM.4	R.NT.5								
18	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4
	R.CM.4	R.NT.4								
19	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4
	R.CM.4	R.NT.2								
20	R.CM.1	R.CM.3	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4	R.CM.4
	R.CM.4	R.NT.5								
21	R.CM.1	R.CM.4	R.IT	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1

Table 3.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 3 Language Arts

	R.IT.1	R.IT.1	R.NT.2							
22	R.CM.4	R.NT.5	R.NT.5	R.NT.5	R.NT.5	R.NT.5	R.NT.5	R.NT.5	R.NT.5	W.PR
	W.PR.4	W.PR.6	W.GN.1	W.GN.2						
23	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT	R.IT.3
	R.IT.4	R.NT.3								
24	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT.4	R.NT.3	R.NT.3
	R.WS.2	R.WS.2	R.WS.2							
25	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.4	R.NT.3								
26	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT
	R.NT.3	R.NT.3								
27	R	R.CM	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.IT	R.IT	R.IT.3	R.IT.3
	R.IT.4	W.PR.1								
28	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.2	R.IT.2
	R.IT.3	R.NT.2								
29	R.CM.2	R.CM.2	R.CM.7	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3								
30	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.7	R.IT	R.IT.3	R.IT.3
	R.IT.3	R.NT.3								
31										
32										
33										
34										
35										

Table 3.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 3 Language Arts

36										
37										
38										
39										
40										
41										
42										
43	W.PR	W.PR.1	W.PR.1	W.PR.2	W.PR.3	W.PR.3	W.PR.3	W.PR.4	W.PR.4	W.PR.6
	W.PR.6	W.PR.7	W.PR.8	W.PR.8	W.GN.1	W.GN.1	W.GN.1	W.GN.1		
44	W.PR.4	W.PR.6	W.PR.6	W.PR.8	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.SP.1	W.SP.1								
45	W.PR.6	W.PR.6	W.PR.8	W.PR.8	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
46	W.PR.6	W.PR.6	W.PR.8	W.PR.8	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1	W.SP.1							
47	R.CM.6	W.PR.8	W.PR.8	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
48	W.PR.6	W.PR.6	W.PR.8	W.PR.8	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
49	R.CM.4	R.NT.4	W.PR	W.PR	W.PR	W.PR.2	W.PR.5	W.PR.5	W.PR.6	W.PR.7
	W.PR.7	W.PR.7	W.PR.7	W.PR.8						

Table 3.10
Items Coded by Reviewers to Each Objective
Michigan Grade 3 Language Arts

Low		Medium		High
0		9.5625		80

R	27																			
R.CM	27																			
R.CM.1	8	10	10	14	14	16	20	21	23	23	27	27								
R.CM.2	2	5	5	5	5	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8
	8	8	8	10	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	
	12	12	13	14	14	23	23	23	23	23	23	24	24	24	24	24	24	24	25	
	25	25	25	26	26	26	26	26	26	26	26	26	27	27	29	29	30	30	30	
	30	30	30																	
R.CM.3	10	10	16	17	17	17	17	17	18	18	18	18	18	19	19	19	19	20	25	
R.CM.4	8	17	17	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19	19	19
	20	20	20	20	20	20	20	20	20	21	22	49								
R.CM.5																				
R.CM.6	47																			
R.CM.7	29	30																		
R.CS																				
R.CS.1																				
R.IT	21	23	26	27	27	30														
R.IT.1	21	21	21	21	21	21	21	21	21	28	28	28	28	28	28	28	28			
R.IT.2	28	28																		
R.IT.3	23	25	25	25	25	25	27	27	28	29	29	29	29	29	29	29	29	29	30	30
	30																			
R.IT.4	4	23	24	25	27															
R.NT	4	16																		
R.N	13																			

Table 3.10
Items Coded by Reviewers to Each Objective
Michigan Grade 3 Language Arts

T.1																				
R.NT.2	6	13	13	13	13	13	13	13	13	13	13	19	21	28						
R.NT.3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
	3	3	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	
	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	10	10	
	10	10	11	11	11	11	16	16	16	23	24	24	25	26	26	30				
R.NT.4	10	10	10	11	12	14	14	14	14	14	14	14	15	15	15	15	15	16	18	49
R.NT.5	17	20	22	22	22	22	22	22	22	22										
R.WS																				
R.WS.1	1	9	15																	
R.WS.2	1	1	1	1	1	1	1	1	1	1	1	9	9	9	9	15	15	24	24	24
R.WS.3	3	9	9	9	9	9	9	9	10	11	15	15	15	15	16	16	16	16	16	
W																				
W.PR	22	43	49	49	49															
W.PR.1	14	27	43	43																
W.PR.2	43	49																		
W.PR.3	43	43	43																	
W.PR.4	22	43	43	44																
W.PR.5	49	49																		
W.PR.6	22	43	43	44	44	45	45	46	46	48	48	49								
W.PR.7	43	49	49	49	49															
W.PR.8	43	43	44	45	45	46	46	47	47	48	48	49								
W.GN																				

Table 3.10
Items Coded by Reviewers to Each Objective
Michigan Grade 3 Language Arts

W.GN.1	22	43	43	43	43															
W.GN.2	22																			
W.HW																				
W.HW.1																				
W.PS																				
W.PS.1																				
W.GR																				
W.GR.1	44	44	44	44	44	44	45	45	45	45	45	45	45	45	46	46	46	46	46	46
	46	46	47	47	47	47	47	47	47	47	47	48	48	48	48	48	48	48	48	
W.SP																				
W.SP.1	44	44	46																	

Table 3.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 3 Language Arts

Low		Medium		High
1		6		12

R	27:1												
R.CM	27:1												
R.CM.1	8:1	10:2	14:2	16:1	20:1	21:1	23:2	27:2					
R.CM.2	2:1	5:12	8:10	10:1	11:6	12:11	13:1	14:2	23:6	24:7	25:4	26:9	27:2
	29:2	30:6											
R.CM.3	10:2	16:1	17:5	18:5	19:4	20:1	25:1						
R.CM.4	8:1	17:6	18:6	19:7	20:9	21:1	22:1	49:1					
R.CM.5													
R.CM.6	47:1												
R.CM.7	29:1	30:1											
R.CS													
R.CS.1													
R.IT	21:1	23:1	26:1	27:2	30:1								
R.IT.1	21:9	28:8											
R.IT.2	28:2												
R.IT.3	23:1	25:5	27:2	28:1	29:9	30:3							
R.IT.4	4:1	23:1	24:1	25:1	27:1								
R.NT	4:1	16:1											
R.NT.1	13:1												
R.NT.2	6:1	13:10	19:1	21:1	28:1								
R.NT.3	2:11	3:11	4:11	6:11	7:12	10:4	11:4	16:3	23:1	24:2	25:1	26:2	30:1

Table 3.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 3 Language Arts

R.NT.4	10:3	11:1	12:1	14:7	15:5	16:1	18:1	49:1
R.NT.5	17:1	20:1	22:8					
R.WS								
R.WS.1	1:1	9:1	15:1					
R.WS.2	1:11	9:4	15:2	24:3				
R.WS.3	3:1	9:7	10:1	11:1	15:4	16:5		
W								
W.PR	22:1	43:1	49:3					
W.PR.1	14:1	27:1	43:2					
W.PR.2	43:1	49:1						
W.PR.3	43:3							
W.PR.4	22:1	43:2	44:1					
W.PR.5	49:2							
W.PR.6	22:1	43:2	44:2	45:2	46:2	48:2	49:1	
W.PR.7	43:1	49:4						
W.PR.8	43:2	44:1	45:2	46:2	47:2	48:2	49:1	
W.GN								
W.GN.1	22:1	43:4						
W.GN.2	22:1							
W.HW								
W.HW.1								
W.PS								

Table 3.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 3 Language Arts

W.PS.1					
W.GR					
W.GR.1	44:6	45:8	46:8	47:9	48:8
W.SP					
W.SP.1	44:2	46:1			

Table 3.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 3 Language Arts

Low DOK		Matched DOK		High DOK
1		6		12

R [2]:	27:1 [3]												
R.CM [2]:	27:1 [2]												
R.CM.1 [3]:	8:1[2]	10:2 [2.5]	14:2 [2]	16:1 [1]	20:1 [2]	21:1 [2]	23:2 [2.5]	27:2 [1.5]					
R.CM.2 [2]:	2:1[1]	5:12 [2]	8:10 [2.5]	10:1 [2]	11:6 [1.17]	12:11[1.91]	13:1 [2]	14:2 [2.5]	23:6 [1.33]	24:7 [1]	25:4 [1]	26:9 [1]	27:2 [2]
	29:2 [1.5]	30:6 [1.17]											
R.CM.3 [3]:	10:2 [2]	16:1 [3]	17:5 [2.2]	18:5 [2]	19:4 [1.5]	20:1 [3]	25:1 [1]						
R.CM.4 [3]:	8:1[3]	17:6 [2.17]	18:6 [2.5]	19:7 [2.43]	20:9 [2.67]	21:1 [2]	22:1 [3]	49:1 [3]					
R.CM.5 [2]:													
R.CM.6 [2]:	47:1 [2]												
R.CM.7 [2]:	29:1 [3]	30:1 [3]											
R.CS [4]:													
R.CS.1 [4]:													
R.IT [2]:	21:1 [1]	23:1 [2]	26:1 [1]	27:2 [2]	30:1 [1]								
R.IT	21:9	28:8											

Table 3.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 3 Language Arts

.1 [1]:	[1.44]	[1.12]											
R.IT.2 [1]:	28:2 [2]												
R.IT.3 [2]:	23:1 [2]	25:5 [1.2]	27:2 [1.5]	28:1 [2]	29:9 [1]	30:3 [1]							
R.IT.4 [4]:	4:1[2]	23:1 [2]	24:1 [1]	25:1 [3]	27:1 [1]								
R.NT [3]:	4:1[2]	16:1 [2]											
R.NT.1 [3]:	13:1 [2]												
R.NT.2 [1]:	6:1[2]	13:10[1.1]	19:1 [2]	21:1 [1]	28:1 [1]								
R.NT.3 [2]:	2:11 [1.18]	3:11 [1.36]	4:11 [1.91]	6:11 [2.09]	7:12 [2.58]	10:4 [2.25]	11:4 [1]	16:3 [2]	23:1 [2]	24:2 [1]	25:1 [1]	26:2 [1]	30:1 [1]
R.NT.4 [3]:	10:3 [2]	11:1 [1]	12:1 [1]	14:7 [2.71]	15:5 [1.6]	16:1 [2]	18:1 [1]	49:1 [3]					
R.NT.5 [4]:	17:1 [3]	20:1 [3]	22:8 [3.5]										
R.WS [2]:													
R.WS.1 [2]:	1:1[1]	9:1[2]	15:1 [1]										
R.WS.2 [1]:	1:11 [1]	9:4[1]	15:2 [1]	24:3 [1]									
R.WS.3 [2]:	3:1[2]	9:7[1.57]	10:1 [2]	11:1 [2]	15:4 [2]	16:5 [2.2]							
W [2]:													

Table 3.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 3 Language Arts

W.PR [2]:	22:1 [3]	43:1 [3]	49:3 [2.33]				
W.PR.1 [2]:	14:1 [2]	27:1 [2]	43:2 [3]				
W.PR.2 [2]:	43:1 [3]	49:1 [3]					
W.PR.3 [3]:	43:3 [3]						
W.PR.4 [3]:	22:1 [3]	43:2 [3.5]	44:1 [1]				
W.PR.5 [2]:	49:2 [2.5]						
W.PR.6 [2]:	22:1 [2]	43:2 [3]	44:2 [1.5]	45:2 [1]	46:2 [1.5]	48:2 [1]	49:1 [3]
W.PR.7 [3]:	43:1 [3]	49:4 [3]					
W.PR.8 [2]:	43:2 [3]	44:1 [1]	45:2 [1.5]	46:2 [1.5]	47:2 [1.5]	48:2 [1.5]	49:1 [3]
W.GN [4]:							
W.GN.1 [4]:	22:1 [3]	43:4 [3]					
W.GN.2 [4]:	22:1 [3]						
W.HW [1]:							
W.HW.1 [1]:							
W.P							

Table 3.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 3 Language Arts

S [3]:					
W.PS.1 [3]:					
W.GR [1]:					
W.GR.1 [1]:	44:6 [1.33]	45:8 [1]	46:8 [1.12]	47:9 [1.11]	48:8 [1.12]
W.SP [1]:					
W.SP.1 [1]:	44:2 [1]	46:1 [1]			

Table 4.1
Categorical Concurrence Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 4 Language Arts
Number of Assessment Items - 45

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	15.17	1 2 3	3 6 6	20 40 40	41.42	2.75	YES
W - Writing	5	11.25	1 2 3 4	2 3 5 1	18 27 45 9	9.58	3.30	YES
Total	10	26.42	1 2 3 4	5 9 11 1	19 34 42 3	51	3.32	

Table 4.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 4 Language Arts
Number of Assessment Items - 45

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	15.17	41.42	2.75	40	41	49	40	12	26	YES
W - Writing	5	11.25	9.58	3.30	14	33	60	46	26	41	YES
Total	10	26.42	51	3.32	31	40	53	43	16	33	

Table 4.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Twelve Reviewers

Michigan Grade 4 Language Arts

Number of Assessment Items - 45

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	15.17	41.42	2.75	10.42	1.11	69	7	YES	81	6	0.68	0.05	WEAK
W - Writing	5	11.25	9.58	3.30	5.42	2.43	48	20	WEAK	19	6	0.79	0.09	YES
Total	10	26.42	51	3.32	7.92	3.13	58	19		50	32	0.73	0.09	

Table 4.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Twelve Reviewers
Michigan Grade 4 Language Arts
Number of Assessment Items - 45

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES

Table 4.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 4 Language Arts

Item Number	Comments by Reviewer
1	*The size and spacing of the print and the difficulty of vocabulary make this text more appropriate for 5th grade than for 4th grade.
3	Bad question, the map is really not helpful in making the point
24	Wording in this objective needs to be changed to include author's purpose, author's feelings/beliefs not just using literary devices
28	Need author's purpose wording in this objective
35	Need additional wording in this objective for author's purpose
57	Wording or objective needs to be added for writing/stating an opinion

Table 4.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 4 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9	Rater 10	Rater 11	Rater 12
1	2	2	2	1	2	1	2	2	2	2	1	2
2	2	1	1	2	1	1	1	1	1	2	1	1
3	2	1	1	2	2	3	1	1	2	2	1	3
4	1	1	2	2	1	1	1	1	1	2	1	1
5	3	2	1	3	1	1	3	2	2	2	3	1
6	2	2	2	2	2	2	3	2	2	2	2	1
7	2	2	2	2	1	2	3	2	3	2	2	3
8	2	2	2	3	2	2	3	2	3	2	3	3
9	1	1	1	1	1	1	1	1	1	1	1	1
10	2	1	2	1	2	2	2	1	2	1	3	3
11	3	2	2	3	2	2	3	2	3	2	3	3
12	2	2	2	3	2	2	3	2	2	2	3	3
13	2	2	2	1	1	3	2	2	3	2	3	2
14	2	2	2	2	2	3	2	2	3	2	3	3
15	3	2	2	2	2	2	3	2	2	2	3	1
16	1	1	1	1	1	1	1	1	2	2	1	1
17	2	2	2	1	2	1	2	2	1	2	2	3
18	3	2	2	2	2	2	2	3	3	2	3	3
19	2	2	2	2	2	2	3	3	3	2	3	3
20	1	1	2	3	1	1	3	2	2	2	2	2
21	2	2	3	2	1	2	3	2	3	2	3	3
22	3	3	3	3	3	3	3	4	3	3	3	3
23	1	1	1	1	1	1	1	1	1	1	1	1
24	1	2	2	2	2	2	2	2	2	2	3	3
25	1	1	1	1	1	1	1	1	2	1	1	3
26	2	1	1	1	1	1	2	2	2	1	2	2
27	2	2	2	3	2	2	2	2	2	2	3	2
28	2	2	2	3	2	2	3	2	2	2	3	2
29	2	2	1	2	1	1	2	1	2	1	2	2
30	2	2	2	1	2	2	2	2	2	2	2	1
31	2	2	1	2	1	1	1	1	3	2	1	1
32	1	1	1	1	1	1	1	1	1	1	1	1
33	1	2	1	1	1	1	1	1	1	1	1	1
34	1	1	1	1	1	1	1	1	1	1	1	1
35	2	2	2	2	2	2	2	2	2	2	3	3
36	1	1	1	2	1	1	1	1	1	1	1	2
37	1	1	1	1	1	1	1	1	1	2	1	2
38	1	1	1	1	1	1	1	1	1	1	1	1
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51	3	3	3	3	3	3	3	4	3	3	3	3
52	2	2	1	1	1	1	2	3	3	2	2	1

Table 4.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 4 Language Arts

53	1	1	1	1	1	1	1	2	1	1	2	1
54	1	1	1	1	1	1	1	2	1	1	1	3
55	1	1	1	1	1	1	1	2	1	1	1	3
56	1	1	1	1	1	1	1	2	1	1	1	3
57	2	2	2	2	3	3	3	3	3	3	3	3

Intraclass Correlation: 0.9428
Pairwise Comparison: 0.6044

Table 4.7
Notes by Reviewer
Michigan Grade 4 Language Arts

Item Number	Comments by Reviewer

Table 4.8

DOK Levels and Objectives Coded by Each Reviewer

Michigan Grade 4 Language Arts

Item	DOK0	PObj0	S1Obj0	S2Obj0	DOK1	PObj1	S1Obj1	S2Obj1	DOK2	PObj2	S1Obj2	S2Obj2	DOK3	PObj3	S1Obj3	S2Obj3	DOK4	PObj4	S1Obj4	S2Obj4	DOK5	PObj5	S1Obj5	S2Obj5
1	2	R.CM.1			2	R.CM.2			2	R.CM.1			1	R.CM.2			2	R.CM.2			1	R.WS.2		
2	2	R.IT.3			1	R.IT.1			1	R.IT.1			2	R.IT.1			1	R.IT.1			1	R.IT.1		
3	2	R.IT.3			1	R.CM.2			1	R.IT.3			2	R.IT.1			2	R.IT.3			3	R.IT.3		
4	1	R.CM.2			1	R.CM.2			2	R.IT.3			2	R.IT.3			1	R.IT.3			1	R.IT.3		
5	3	R.CM.1			2	R.CM.2			1	R.CM.2			3	R.CM.1			1	R.CM.2			1	R.CM.2		
6	2	R.CM.1			2	R.CM.2			2	R.CM.1			2	R.CM.2			2	R.CM.1			2	R.CM.2		
7	2	R.CM.1			2	R.CM.2			2	R.CM.1			2	R.CM.2			1	R.CM.1			2	R.CM.1		
8	2	R.CM.2			2	R.CM.2			2	R.CM.2			3	R.CM.1			2	R.CM.2			2	R.CM.2		
9	1	R.CM.2			1	R.NT.3			1	R.NT.3			1	R.CM.2			1	R.CM.2			1	R.CM.2		
10	2	R.NT.3			1	R.CM.2			2	R.NT.3			1	R.CM.2			2	R.CM.1			2	R.NT.3		
11	3	R.NT.3			2	R.NT.3	R.CM.2		2	R.NT.3			3	R.CM.1			2	R.NT.3			2	R.NT.3		
12	2	R.NT.4			2	R.NT.4			2	R.NT.4			3	R.NT.4			2	R.NT.4			2	R.NT.4		
13	2	R.CM.1			2	R.CM.2			2	R.CM.2			1	R.CM.2			1	R.CM.2			3	R.NT.2		
14	2	R.NT.3			2	R.NT.1			2	R.NT.3			2	R.CM.1			2	R.NT.3			3	R.NT.3		
15	3	R.NT.3			2	R.NT.3			2	R.NT.3			2	R.NT.3	R.CM.3		2	R.CM.1			2	R.NT.2		
16	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
17	2	R.IT.3			2	R.CM.3			2	R.IT.1			1	R.IT.2	R.NT.2		2	R.IT.1			1	R.NT.2		
18	3	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.2	R.CM.3		2	R.CM	R.IT.3	R.NT.4	2	R.NT.4		
19	2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3		
20	1	R.NT.2			1	R.NT.2			2	R.NT.2			3	R.CM.3			1	R.NT.2			1	R.NT.2		
21	2	R.NT.4			2	R.CM.3			3	R.CM.3			2	R.CM.2	R.NT.3		1	R.CM	R.NT.4	R.IT.3	2	R.NT.4		
22	3	W.PR.4	W.PR.2	W.PR.6	3	W.PR.4	W.PR.2		3	W.PR.4	R.CS.1	W.PR.1	3	W.PR.1			3	W.PR	W.PR.1	W.PS.1	3	R.CM.1	R.CS.1	R.CM.3
23	1	R.CM.			1	R.CM.			1	R.CM.			1	R.CM.			1	R.CM.			1	R.CM.		

Table 4.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 4 Language Arts

		2				2				2				2				2				2		
24	1	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.NT.4			2	R.NT.3		
25	1	R.IT.1			1	R.IT.1			1	R.IT.1			1	R.NT.2			1	R.NT.2			1	R.NT.2		
26	2	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
27	2	R.CM.1			2	R.CM.2			2	R.CM.1			3	R.IT.2	R.CM.3		2	R.NT.3			2	R.NT.3		
28	2	R.IT.3			2	R.IT.3	R.CM.2		2	R.IT.3			3	R.CM.3			2	R.NT.2			2	R.NT.4		
29	2	R.IT.1			2	R.IT.1			1	R.IT.1			2	R.IT.1			1	R.NT.2			1	R.IT.1		
30	2	R.WS.3			2	R.WS.3			2	R.WS.3			1	R.WS.3			2	R.WS.3			2	R.WS.3		
31	2	R.CM.1			2	R.CM.1			1	R.CM.2			2	R.CM.1			1	R.CM.2			1	R.CM.2		
32	1	R.IT.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
33	1	R.CM.2			2	R.CM.1			1	R.CM.2			1	R.IT.3			1	R.IT.3			1	R.IT.3		
34	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
35	2	R.IT.3			2	R.CM.2			2	R.IT.3			2	R.IT.3			2	R.IT.3			2	R.IT.3		
36	1	R.IT.1			1	R.IT.1			1	R.IT.1			2	R.IT.2			1	R.IT.1			1	R.IT.1		
37	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.IT.3			1	R.IT.3			1	R.IT.3		
38	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.IT.3			1	R.CM.2			1	R.IT.3		
39																								
40																								
41																								
42																								
43																								
44																								
45																								
46																								
47																								
48																								
49																								
50																								
51	3	W.PR.4	W.PR.2	W.PR.6	3	W.PR.1	W.PR.2	R.CS.1	3	W.PR.2	R.CS.1	W.PR.6	3	W.PR.3	W.GR.1	W.PR.1	3	W.PR	W.PR.1	W.PS.1	3	W.GN.1	R.CM.1	R.CS.1
52	2	W.PR.2			2	R.CM.2			1	W.PR.2			1	R.CM.2			1	W.GR.1			1	W.PR.2		
53	1	W.GR.			1	W.GR.			1	W.GR.			1	W.GR.			1	W.GR.			1	W.GR.		

Table 4.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 4 Language Arts

		1				1				1				1				1				1		
54	1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		
55	1	W.SP.1			1	W.SP.1			1	W.SP.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		
56	1	W.GR.1			1	W.GR.1			1	W.PS.1			1	W.GR.1			1	W.GR.1			1	W.GR.1		
57	2	W.GN.2	W.PR.4		2	W.PR.1	W.PR.2	R.CS.1	2	R.IT.2	W.PR.5		2	W.PR.4			3	W.PR	W.PS.1		3	R.CS.1	R.NT.4	

Item	DOK6	PObj6	S1Obj6	S2Obj6	DOK7	PObj7	S1Obj7	DOK8	PObj8	S1Obj8	S2Obj8	DOK9	PObj9	S1Obj9	S2Obj9	DOK10	PObj10	S1Obj10	S2Obj10	DOK11	PObj11
1	2	R.CM.2			2	R.CM.2		2	R.CM.1			2	R.CM.2			1	R.CM.2			2	R.CM.2
2	1	R.IT.1			1	R.IT.1		1	R.NT.1			2	R.IT.3			1	R.IT.1			1	R.IT.1
3	1	R.IT.3			1	R.CM.2		2	R.CM.1			2	R.IT.3			1	R.IT.3			3	R.IT.1
4	1	R.IT.3			1	R.CM.2		1	R.NT.3	R.CM.2		2	R.IT.3			1	R.IT.3			1	R.IT.1
5	3	R.CM.1			2	R.CM.2		2	R.CM.2			2	R.CM.1			3	R.CM.1			1	R.CM.2
6	3	R.CM.1			2	R.CM.2		2	R.CM.1			2	R.CM.2			2	R.CM.2			1	R.CM.2
7	3	R.CM.1			2	R.CM.2		3	R.CM.2			2	R.CM.2			2	R.CM.1			3	R.CM.1
8	3	R.CM.2			2	R.CM.2		3	R.CM.1			2	R.CM.2			3	R.CM.2			3	R.CM.1
9	1	R.CM.2			1	R.NT.3	R.CM.2	1	R.NT.3			1	R.CM.2			1	R.CM.2			1	R.CM.2
10	2	R.CM.1			1	R.CM.2		2	R.NT.3			1	R.CM.1			3	R.NT.1			3	R.NT.1
11	3	R.CM.1			2	R.NT.3	R.CM.2	3	R.NT.3			2	R.NT.4			3	R.NT.3			3	R.CM.3
12	3	R.NT.4			2	R.NT.4		2	R.NT.4			2	R.NT.4			3	R.NT.4			3	R.NT.4
13	2	R.CM.2	R.NT.3		2	R.CM.2		3	R.CM.2			2	R.CM.2			3	R.CM.2	R.NT.3		2	R.CM.2
14	2	R.NT.3			2	R.NT.1		3	R.NT.3			2	R.CM.1			3	R.NT.1			3	R.NT.3
15	3	R.NT.1			2	R.NT.3		2	R.IT.3			2	R.CM.1			3	R.NT.3			1	R.CM.2
16	1	R.NT.3			1	R.CM.2		2	R.NT.3			2	R.CM.2			1	R.CM.2			1	R.CM.1
17	2	R.CM.3			2	R.CM.3		1	R.IT.3			2	R.CM.3			2	R.IT.3	R.NT.2		3	R.CM.3

Table 4.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 4 Language Arts

18	2	R.NT.4			3	R.NT.4		3	R.IT.3			2	R.CM.3			3	R.CM	R.NT.4	R.IT.3	3	R.CM.3
19	3	R.NT.1			3	R.CM.3		3	R.CM.3			2	R.CM.3			3	R.CM.3			3	R.CM.3
20	3	R.CM.3	R.IT.2	R.NT.2	2	R.NT.2		2	R.NT.2			2	R.CM.3			2	R.CM.3	R.IT.1	R.NT.2	2	R.CM.3
21	3	R.NT.4			2	R.CM.3		3	R.CM.3			2	R.CM.3			3	R.CM.3	R.IT.2	R.NT.4	3	R.CM.2
22	3	W.PR	W.PR.4	W.PR.5	4	R.CM.3		3	R.CM.3	R.NT.3	R.CS.1	3	R.CM.3			3	W.PR.4	W.PR.2		3	W.PR.4
23	1	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2
24	2	R.NT.4			2	R.NT.4		2	R.NT.4			2	R.NT.4			3	R.NT.4			3	R.IT.3
25	1	R.NT.2			1	R.IT.1		2	R.NT.2			1	R.NT.2			1	R.NT.2			3	R.IT.1
26	2	R.CM.2			2	R.CM.2		2	R.CM.2			1	R.CM.2			2	R.CM.2			2	R.CM.2
27	2	R.CM.2			2	R.NT.3		2	R.CM.2			2	R.CM.2			3	R.CM.2	R.NT.3		2	R.CM.2
28	3	R.NT.4			2	R.NT.3		2	R.NT.4			2	R.NT.4			3	R.NT.4			2	R.CM.4
29	2	R.IT.1			1	R.NT.1		2	R.IT.1			1	R.NT.2			2	R.IT.1			2	R.IT.1
30	2	R.WS.1			2	R.WS.3		2	R.WS.3			2	R.WS.3			2	R.WS.3			1	R.WS.3
31	1	R.CM.2			1	R.CM.2		3	R.CM.1			2	R.CM.1			1	R.CM.2			1	R.CM.2
32	1	R.CM.2			1	R.CM.2		1	R.WS.2			1	R.CM.2			1	R.CM.2			1	R.CM.2
33	1	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2
34	1	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2
35	2	R.IT.3			2	R.NT.4		2	R.IT.3			2	R.IT.3			3	R.IT.3			3	R.IT.3
36	1	R.IT.1			1	R.IT.1		1	R.IT.1			1	R.IT.1			1	R.IT.2			2	R.IT.1
37	1	R.IT.3			1	R.CM.2		1	R.CM.2			2	R.IT.3			1	R.IT.3			2	R.CM.1
38	1	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2
39																					
40																					
41																					
42																					
43																					
44																					
45																					
46																					

Table 4.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 4 Language Arts

47																					
48																					
49																					
50																					
51	3	W.PR. 1	W.PS. 1	W.GN. 2	4	W.GN. 1		3	W.PR. 1	W.PR. 2		3	W.PR. 2	W.GN. 1	W.PS. 1	3	W.PR. 1	W.PR. 2	W.PR. 3	3	W.GN. 1
52	2	W.PR. 2			3	W.PR. 4		3	W.PR. 2			2	R.CM. 2			2	W.PR. 2			1	W.PR. 2
53	1	W.PR. 6	W.GR. 1		2	R.WS. 3		1	W.GR. 1			1	W.GR. 1			2	W.GR. 1			1	W.PR. 2
54	1	W.PR. 6	W.SP. 1		2	R.WS. 3		1	W.GR. 1			1	W.GR. 1			1	W.GR. 1			3	W.PR. 4
55	1	W.PR. 6	W.SP. 1		2	R.WS. 3		1	W.SP. 1			1	W.SP. 1			1	W.SP. 1			3	W.PR. 4
56	1	W.PR. 6	W.GN. 1		2	R.WS. 3		1	W.GR. 1			1	W.GR. 1			1	W.GR. 1			3	W.PR. 4
57	3	R.NT.4			3	R.IT.2		3	R.NT.2	W.PR. 4		3	W.PR. 6	W.PR. 5	W.PS. 1	3	W.PR			3	W.PR. 4

Pairwise Comparison: 0.4918
Standard Pairwise Comparison: 0.9497

Table 4.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 4 Language Arts

Low		Medium		High
0		10.73684		31

1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.WS.2								
2	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.3
	R.IT.3	R.NT.1								
3	R.CM.1	R.CM.2	R.CM.2	R.IT.1	R.IT.1	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3								
4	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT.1	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3	R.NT.3							
5	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
6	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
7	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
8	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
9	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.NT.3
	R.NT.3	R.NT.3	R.NT.3							
10	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.NT.1	R.NT.1	R.NT.3	R.NT.3
	R.N	R.N								

Table 4.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 4 Language Arts

	T.3	T.3								
11	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.NT.3	R.NT.3	R.NT.4						
12	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4								
13	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.NT.2	R.NT.3	R.NT.3						
14	R.CM.1	R.CM.1	R.NT.1	R.NT.1	R.NT.1	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.NT.3								
15	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.IT.3	R.NT.1	R.NT.2	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.NT.3	R.NT.3							
16	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.NT.3	R.NT.3								
17	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.IT.1	R.IT.1	R.IT.2	R.IT.3	R.IT.3
	R.IT.3	R.NT.2	R.NT.2	R.NT.2						
18	R.CM	R.CM	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.IT.3
	R.IT.3	R.IT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4			
19	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3
	R.CM.3	R.NT.1								
20	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.IT.1	R.IT.2	R.NT.2	R.NT.2	R.NT.2
	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2				
21	R.CM	R.CM.2	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.IT.2

Table 4.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 4 Language Arts

	R.IT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4			
22	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CS.1	R.CS.1	R.CS.1	R.NT.3	W.PR
	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.2	W.PR.4	W.PR.4	
	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.5	W.PR.6	W.PS.1			
23	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
24	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.IT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4								
25	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2
	R.NT.2	R.NT.2								
26	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
27	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.IT.2
	R.NT.3	R.NT.3	R.NT.3	R.NT.3						
28	R.CM.2	R.CM.3	R.CM.4	R.IT.3	R.IT.3	R.IT.3	R.NT.2	R.NT.3	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	R.NT.4							
29	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.NT.1
	R.NT.2	R.NT.2								
30	R.WS.1	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	R.WS.3								
31	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.C	R.C								

Table 4.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 4 Language Arts

	M.2	M.2								
32	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.IT.2	R.WS.2								
33	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT.3
	R.IT.3	R.IT.3								
34	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
35	R.CM.2	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.NT.4								
36	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1
	R.IT.2	R.IT.2								
37	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3								
38	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.IT.3	R.IT.3								
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	R.CM.1	R.CS.1	R.CS.1	R.CS.1	W.GN.1	W.GN.1	W.GN.1	W.GN.1	W.GN.2	W.PR

Table 4.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 4 Language Arts

	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.2	
	W.PR.2	W.PR.2	W.PR.2	W.PR.3	W.PR.3	W.PR.4	W.PR.6	W.PR.6	W.PS.1	
	W.PS.1	W.PS.1	W.GR.1							
52	R.CM.2	R.CM.2	R.CM.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2
	W.PR.4	W.GR.1								
53	R.WS.3	W.PR.2	W.PR.6	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1	W.GR.1							
54	R.WS.3	W.PR.4	W.PR.6	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1	W.SP.1							
55	R.WS.3	W.PR.4	W.PR.6	W.GR.1	W.GR.1	W.GR.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1
	W.SP.1	W.SP.1	W.SP.1							
56	R.WS.3	W.GN.1	W.PR.4	W.PR.6	W.PS.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1	W.GR.1							
57	R.CS.1	R.CS.1	R.IT.2	R.IT.2	R.NT.2	R.NT.4	R.NT.4	W.GN.2	W.PR	W.PR
	W.PR.1	W.PR.2	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.5	W.PR.5	W.PR.6	
	W.PS.1	W.PS.1								

Table 4.10
Items Coded by Reviewers to Each Objective
Michigan Grade 4 Language Arts

Low		Medium		High
0		15.69231		166

R																				
R.CM	18	18	21																	
R.CM.1	1	1	1	3	5	5	5	5	5	6	6	6	6	6	7	7	7	7	7	7
	7	8	8	8	10	10	10	11	11	13	14	14	15	15	16	22	24	24	24	
	24	27	27	31	31	31	31	31	33	37	51									
R.CM.2	1	1	1	1	1	1	1	1	3	3	4	4	4	4	5	5	5	5	5	5
	5	6	6	6	6	6	6	6	7	7	7	7	7	8	8	8	8	8	8	
	8	8	8	9	9	9	9	9	9	9	9	9	10	10	10	11	11	13	13	
	13	13	13	13	13	13	13	13	15	16	16	16	16	16	16	16	16	16	18	
	21	21	23	23	23	23	23	23	23	23	23	23	23	23	26	26	26	26	26	
	26	26	26	26	26	26	26	27	27	27	27	27	27	28	31	31	31	31	31	
	31	31	32	32	32	32	32	32	32	32	32	32	33	33	33	33	33	33	33	
	33	34	34	34	34	34	34	34	34	34	34	34	34	35	37	37	37	37	37	
	38	38	38	38	38	38	38	38	38	38	52	52	52							
R.CM.3	11	15	17	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19	19	19
	19	19	19	19	20	20	20	20	20	21	21	21	21	21	21	22	22	22	22	
	27	28																		
R.CM.4	28																			
R.CS																				
R.CS.1	22	22	22	51	51	51	57	57												
R.IT																				
R.IT.1	2	2	2	2	2	2	2	2	2	3	3	4	17	17	20	25	25	25	25	25
	29	29	29	29	29	29	29	29	29	36	36	36	36	36	36	36	36	36	36	
R.IT.2	17	20	21	27	32	36	36	57	57											
R.IT.3	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	15	17	17	17
	18	18	18	21	24	28	28	28	33	33	33	35	35	35	35	35	35	35	35	
	35	35	37	37	37	37	37	37	38	38										
R.N																				

Table 4.10
Items Coded by Reviewers to Each Objective
Michigan Grade 4 Language Arts

T																				
R.NT.1	2	10	10	14	14	14	15	19	29											
R.NT.2	13	15	17	17	17	20	20	20	20	20	20	20	20	20	25	25	25	25	25	25
	25	28	29	29	57															
R.NT.3	4	9	9	9	9	10	10	10	10	11	11	11	11	11	11	11	11	13	13	14
	14	14	14	14	14	14	15	15	15	15	15	15	16	16	21	22	24	27	27	
	27	27	28																	
R.NT.4	11	12	12	12	12	12	12	12	12	12	12	12	12	18	18	18	18	18	21	21
	21	21	21	24	24	24	24	24	24	28	28	28	28	28	35	57	57			
R.WS																				
R.WS.1	30																			
R.WS.2	1	32																		
R.WS.3	30	30	30	30	30	30	30	30	30	30	30	53	54	55	56					
W																				
W.GN																				
W.GN.1	51	51	51	51	56															
W.GN.2	51	57																		
W.PR	22	22	51	57	57															
W.PR.1	22	22	22	51	51	51	51	51	51	57										
W.PR.2	22	22	22	51	51	51	51	51	51	52	52	52	52	52	52	52	53	57		
W.PR.3	51	51																		
W.PR.4	22	22	22	22	22	22	51	52	54	55	56	57	57	57	57					
W.PR.5	22	57	57																	
W.PR.6	22	51	51	53	54	55	56	57												
W.P																				

Table 4.10
Items Coded by Reviewers to Each Objective
Michigan Grade 4 Language Arts

S																				
W.PS.1	22	51	51	51	56	57	57													
W.GR																				
W.GR.1	51	52	53	53	53	53	53	53	53	53	53	53	54	54	54	54	54	54	54	54
	54	55	55	55	56	56	56	56	56	56	56	56								
W.SP																				
W.SP.1	54	55	55	55	55	55	55	55												

Table 4.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 4 Language Arts

Low		Medium		High
1		6		12

R													
R.CM	18:2	21:1											
R.CM.1	1:3	3:1	5:5	6:5	7:7	8:3	10:3	11:2	13:1	14:2	15:2	16:1	22:1
	24:4	27:2	31:5	33:1	37:1	51:1							
R.CM.2	1:8	3:2	4:4	5:7	6:7	7:5	8:9	9:9	10:3	11:2	13:10	15:1	16:9
	18:1	21:2	23:12	26:12	27:6	28:1	31:7	32:10	33:8	34:12	35:1	37:5	38:10
	52:3												
R.CM.3	11:1	15:1	17:5	18:6	19:11	20:5	21:6	22:4	27:1	28:1			
R.CM.4	28:1												
R.CS													
R.CS.1	22:3	51:3	57:2										
R.IT													
R.IT.1	2:9	3:2	4:1	17:2	20:1	25:5	29:9	36:10					
R.IT.2	17:1	20:1	21:1	27:1	32:1	36:2	57:2						
R.IT.3	2:2	3:7	4:7	15:1	17:3	18:3	21:1	24:1	28:3	33:3	35:10	37:6	38:2
R.NT													
R.NT.1	2:1	10:2	14:3	15:1	19:1	29:1							
R.NT.2	13:1	15:1	17:3	20:9	25:7	28:1	29:2	57:1					
R.NT.3	4:1	9:4	10:4	11:8	13:2	14:7	15:6	16:2	21:1	22:1	24:1	27:4	28:1
R.NT.4	11:1	12:12	18:5	21:5	24:6	28:5	35:1	57:2					
R.WS													
R.W	30:1												

Table 4.11

Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 4 Language Arts

S.1							
R.WS.2	1:1	32:1					
R.WS.3	30:11	53:1	54:1	55:1	56:1		
W							
W.GN							
W.GN.1	51:4	56:1					
W.GN.2	51:1	57:1					
W.PR	22:2	51:1	57:2				
W.PR.1	22:3	51:6	57:1				
W.PR.2	22:3	51:6	52:7	53:1	57:1		
W.PR.3	51:2						
W.PR.4	22:6	51:1	52:1	54:1	55:1	56:1	57:4
W.PR.5	22:1	57:2					
W.PR.6	22:1	51:2	53:1	54:1	55:1	56:1	57:1
W.PS							
W.PS.1	22:1	51:3	56:1	57:2			
W.GR							
W.GR.1	51:1	52:1	53:10	54:9	55:3	56:8	
W.SP							
W.SP.1	54:1	55:7					

Table 4.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 4 Language Arts

Low DOK		Matched DOK		High DOK
1		6		12

R [2]:													
R.CM [3]:	18:2 [2.5]	21:1 [1]											
R.CM.1 [3]:	1:3[2]	3:1[2]	5:5[2.8]	6:5[2.2]	7:7[2.14]	8:3[3]	10:3 [1.67]	11:2 [3]	13:1 [2]	14:2 [2]	15:2 [2]	16:1 [1]	22:1 [3]
	24:4 [1.75]	27:2 [2]	31:5 [2.2]	33:1 [2]	37:1 [2]	51:1 [3]							
R.CM.2 [2]:	1:8[1.75]	3:2[1]	4:4[1]	5:7[1.43]	6:7[1.86]	7:5[2.2]	8:9[2.22]	9:9[1]	10:3 [1]	11:2 [2]	13:10[2]	15:1 [1]	16:9 [1.11]
	18:1 [2]	21:2 [2.5]	23:12[1]	26:12[1.5]	27:6 [2.17]	28:1 [2]	31:7 [1]	32:10[1]	33:8 [1]	34:12[1]	35:1 [2]	37:5 [1]	38:10[1]
	52:3 [1.67]												
R.CM.3 [3]:	11:1 [3]	15:1 [2]	17:5 [2.2]	18:6 [2.33]	19:11[2.36]	20:5 [2.4]	21:6 [2.5]	22:4 [3.25]	27:1 [3]	28:1 [3]			
R.CM.4 [2]:	28:1 [2]												
R.CS [3]:													
R.CS.1 [3]:	22:3 [3]	51:3 [3]	57:2 [2.5]										
R.IT [2]:													
R.IT.1 [1]:	2:9[1.11]	3:2[2.5]	4:1[1]	17:2 [2]	20:1 [2]	25:5 [1.4]	29:9 [1.78]	36:10[1.1]					
R.IT	17:1	20:1	21:1	27:1	32:1	36:2	57:2						

Table 4.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 4 Language Arts

.2 [2]:	[1]	[3]	[3]	[3]	[1]	[1.5]	[2.5]						
R.IT.3 [2]:	2:2[2]	3:7[1.71]	4:7[1.43]	15:1 [2]	17:3 [1.67]	18:3 [2.67]	21:1 [1]	24:1 [3]	28:3 [2]	33:3 [1]	35:10[2.2]	37:6 [1.17]	38:2 [1]
R.NT [3]:													
R.NT.1 [3]:	2:1[1]	10:2 [3]	14:3 [2.33]	15:1 [3]	19:1 [3]	29:1 [1]							
R.NT.2 [1]:	13:1 [3]	15:1 [2]	17:3 [1.33]	20:9 [1.67]	25:7 [1.14]	28:1 [2]	29:2 [1]	57:1 [3]					
R.NT.3 [3]:	4:1[1]	9:4[1]	10:4 [2]	11:8 [2.38]	13:2 [2.5]	14:7 [2.43]	15:6 [2.33]	16:2 [1.5]	21:1 [2]	22:1 [3]	24:1 [2]	27:4 [2.25]	28:1 [2]
R.NT.4 [3]:	11:1 [2]	12:12[2.33]	18:5 [2.4]	21:5 [2.2]	24:6 [2.17]	28:5 [2.4]	35:1 [2]	57:2 [3]					
R.WS [2]:													
R.WS.1 [2]:	30:1 [2]												
R.WS.2 [1]:	1:1[1]	32:1 [1]											
R.WS.3 [2]:	30:11[1.82]	53:1 [2]	54:1 [2]	55:1 [2]	56:1 [2]								
W [3]:													
W.GN [4]:													
W.GN.1 [3]:	51:4 [3.25]	56:1 [1]											
W.GN.2 [4]:	51:1 [3]	57:1 [2]											

Table 4.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 4 Language Arts

W.PR [3]:	22:2 [3]	51:1 [3]	57:2 [3]				
W.PR.1 [3]:	22:3 [3]	51:6 [3]	57:1 [2]				
W.PR.2 [2]:	22:3 [3]	51:6 [3]	52:7 [1.71]	53:1 [1]	57:1 [2]		
W.PR.3 [3]:	51:2 [3]						
W.PR.4 [2]:	22:6 [3]	51:1 [3]	52:1 [3]	54:1 [3]	55:1 [3]	56:1 [3]	57:4 [2.5]
W.PR.5 [3]:	22:1 [3]	57:2 [2.5]					
W.PR.6 [2]:	22:1 [3]	51:2 [3]	53:1 [1]	54:1 [1]	55:1 [1]	56:1 [1]	57:1 [3]
W.PS [3]:							
W.PS.1 [3]:	22:1 [3]	51:3 [3]	56:1 [1]	57:2 [3]			
W.GR [1]:							
W.GR.1 [1]:	51:1 [3]	52:1 [1]	53:10[1.1]	54:9 [1]	55:3 [1]	56:8 [1]	
W.SP [1]:							
W.SP.1 [1]:	54:1 [1]	55:7 [1]					

Table 5.1
Categorical Concurrence Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 5 Language Arts
Number of Assessment Items - 45

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	15	1 2 3	3 6 6	20 40 40	42.17	5.46	YES
W - Writing	6	11.17	1 2 3	3 2 6	27 18 54	7.42	3.17	YES
Total	11	26.17	1 2 3	6 8 12	23 30 46	49.58	4.66	

Table 5.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 5 Language Arts
Number of Assessment Items - 45

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	15	42.17	5.46	40	42	49	41	10	26	YES
W - Writing	6	11.17	7.42	3.17	10	24	75	36	15	32	YES
Total	11	26.17	49.58	4.66	31	40	57	41	12	28	

Table 5.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Twelve Reviewers

Michigan Grade 5 Language Arts

Number of Assessment Items - 45

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	15	42.17	5.46	9.75	1.23	65	8	YES	85	6	0.66	0.04	WEAK
W - Writing	6	11.17	7.42	3.17	4.25	1.36	38	12	NO	15	6	0.81	0.09	YES
Total	11	26.17	49.58	4.66	7	3.04	52	17		50	36	0.73	0.10	

Table 5.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Twelve Reviewers
Michigan Grade 5 Language Arts
Number of Assessment Items - 45

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	NO	YES

Table 5.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 5 Language Arts

Item Number	Comments by Reviewer
11	No clear Standard to match, a standard that speaks specifically to using narrative writing techniques in informational text needs to be developed.
11	Need wording for author's purpose in this objective.
24	See note.
55	Note: B and C are both candidates for the correct answer to this question. The items in the organizer are not parallel. Take out the context and the ending and rethink the events and this will be a better item.

Table 5.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 5 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9	Rater 10	Rater 11	Rater 12
1	2	2	2	2	1	1	2	2	3	2	3	3
2	3	2	2	3	2	2	1	2	3	2	3	3
3	2	2	2	3	2	1	2	2	2	2	2	1
4	2	2	2	1	1	1	1	1	2	2	1	3
5	1	1	1	1	2	1	1	1	1	1	1	3
6	1	1	1	1	1	1	1	1	2	1	1	1
7	2	2	2	1	2	1	1	2	2	1	2	2
8	2	2	2	2	1	1	1	1	2	2	1	2
9	2	2	2	2	1	1	2	2	3	1	3	2
10	2	2	2	2	2	2	2	2	3	2	3	3
11	2	2	2	3	2	2	2	2	3	2	3	2
12	1	1	1	1	1	1	1	1	2	2	2	1
13	1	2	1	1	1	2	2	1	2	2	2	1
14	1	2	1	1	1	2	1	1	2	2	3	1
15	1	1	1	1	1	1	1	1	2	1	3	1
16	3	2	2	1	2	1	1	1	3	2	3	1
17	3	2	2	3	3	2	3	2	3	2	3	3
18	2	2	2	3	1	2	3	2	3	2	3	2
19	2	2	2	3	3	2	3	2	2	2	3	3
20	3	2	2	2	3	2	2	2	3	2	3	2
21	2	2	2	2	2	2	3	2	3	2	3	2
22	3	3	3	3	3	3	3	4	3	3	3	3
23	1	1	1	1	1	1	1	2	1	1	1	2
24	1	1	2	2	2	2	2	2	2	2	1	3
25	2	2	2	3	1	2	2	2	2	2	1	2
26	2	2	2	2	1	2	2	2	2	2	1	1
27	1	2	2	2	2	2	2	2	3	2	2	3
28	2	2	1	2	1	1	2	2	2	2	2	1
29	3	2	2	3	2	3	2	2	3	2	3	3
30	2	2	2	3	2	1	3	2	3	2	3	3
31	2	2	1	2	2	1	1	2	3	1	1	1
32	1	1	1	2	1	1	1	1	1	2	1	1
33	2	1	2	2	2	1	1	2	2	2	1	1
34	1	1	2	2	1	1	1	1	2	2	1	1
35	2	2	2	3	1	1	1	2	2	2	2	1
36	3	2	2	2	2	2	2	2	2	2	2	1
37	2	2	2	2	1	2	2	2	3	2	3	3
38	2	2	1	3	2	2	2	2	3	2	3	1
39												
40												
41												
42												
43												
44												
45												
46												
47												

Table 5.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 5 Language Arts

48												
49												
50												
51	3	3	3	3	3	3	3	4	3	3	3	3
52	2	2	2	2	2	2	2	1	2	2	3	2
53	2	2	2	3	1	2	2	2	2	2	2	3
54	2	2	2	3	1	2	2	2	2	2	3	3
55	2	2	2	2	1	2	1	2	2	2	2	1
56	1	1	1	1	1	1	1	1	1	1	1	3
57	2	3	3	2	3	3	2	3	3	3	3	3

Intraclass Correlation: 0.9141
Pairwise Comparison: 0.5391

Table 5.7
Notes by Reviewer
Michigan Grade 5 Language Arts

Item Number	Comments by Reviewer
24	The distractors are not plausible, too easy. Even the correct answer is not really accurate as the first and last lines are not the same.
24	confusing. Relationship between stem and foils is very misleading.
25	This may not an accurate placement of this item. The standard mentions poetry, but knowing this (alliteration) is a characteristic of poetry may be advanced. Not clearly addressed in the standard.
54	Items and standards are not cohesive in this section. In some cases, these questions may also be seen as reading selections.

Table 5.8

DOK Levels and Objectives Coded by Each Reviewer

Michigan Grade 5 Language Arts

Item	DOK 0	PObj0	S1Obj 0	S2Obj 0	DOK 1	PObj1	S1Obj 1	S2Obj 1	DOK 2	PObj2	S1Obj 2	S2Obj 2	DOK 3	PObj3	S1Obj 3	S2Obj 3	DOK 4	PObj4	S1Obj 4	S2Obj 4	DOK5	PObj5	S1Obj 5	S2Obj 5
1	2	R.IT.3			2	R.CS.1			2	R.IT.1			2	R.IT.3			1	R.CM.1			1	R.IT.1		
2	3	R.CM.1			2	R.CM.1			2	R.CM.1			3	R.IT.3	R.CM.1	R.NT.4	2	R.CM.1			2	R.CM.2		
3	2	R.IT.3			2	R.CM.1			2	R.CM.1			3	R.CM.4	R.IT.3		2	R.CM.1			1	R.CM.2		
4	2	R.IT.3			2	R.IT.3			2	R.CM.1			1	W.GR.1			1	W.GR.1			1	R.NT.4		
5	1	R.CM.2			1	R.CM.2			1	R.IT.3			1	R.IT.1			2	R.IT.3			1	R.IT.3		
6	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
7	2	R.IT.3			2	R.IT.3			2	R.IT.3			1	R.IT.1			2	R.CM.1			1	R.IT.3		
8	2	R.IT.3			2	R.IT.3			2	R.IT.3			2	R.IT.2	R.CM.2		1	R.IT.3			1	R.IT.3		
9	2	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.1			1	R.CM.2			1	R.CM.2		
10	2	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.2			2	R.CM.1			2	R.NT.2		
11	2	R.NT.4			2	R.NT.4			2	R.NT.4			3	R.IT.3			2	R.IT.3			2	R.IT.3		
12	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
13	1	R.CM.1			2	R.CM.1			1	R.CM.2			1	R.CM.1			1	R.CM.2			2	R.NT.3		
14	1	R.CM.2			2	R.CM.1			1	R.CM.2			1	R.CM.2			1	R.CM.1			2	R.CM.2		
15	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
16	3	R.CM.1			2	R.CM.1			2	R.CM.1			1	R.CM.2			2	R.CM.1			1	R.CM.2		
17	3	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.2	R.CM.4		3	R.CM.3			2	R.CM.3		
18	2	R.CM.3			2	R.CM.3			2	R.IT.1			3	R.CM.2	R.CM.1	R.CM.3	1	R.IT.1			2	R.NT.2		
19	2	R.CM.3			2	R.CM.3			2	R.CM.2			3	R.CM.3	R.CM.1		3	R.CM.3			2	R.CM.2		
20	3	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3			2	R.CM.3		
21	2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3			2	R.CM.3		
22	3	W.PR.3	W.PR.2		3	W.PR.2	W.PR.1	R.CS.1	3	W.GN.2	W.PR.5		3	W.PR.1	W.GR.1		3	W.PR	W.PR.1	W.PR.3	3	R.CM.1	R.CM.3	R.CS.1
23	1	R.NT.2			1	R.IT.1			1	R.NT.2			1	R.NT.2			1	R.NT.2			1	R.NT.2		

Table 5.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 5 Language Arts

24	1	R.NT.4			1	R.IT.3			2	R.NT.4			2	R.NT.3	R.CM.3	R.CM.2	2	R.NT.4			2	R.NT.4		
25	2	R.NT.4			2	R.NT.2			2	R.NT.4			3	R.NT.4			1	R.NT.4			2	R.NT.4		
26	2	R.NT.4			2	R.WS.3			2	R.NT.4			2	R.NT.2			1	W.PR.1			2	R.NT.4		
27	1	R.CM.1			2	R.CM.1			2	R.NT.3			2	R.CM.1			2	R.NT.3			2	R.NT.3		
28	2	R.WS.3			2	R.WS.3			1	R.WS.3			2	R.WS.1	R.WS.3		1	R.WS.3			1	R.WS.3		
29	3	R.CM.1			2	R.CM.1			2	R.NT.4			3	R.NT.4	R.CM.3	R.CM.1	2	R.NT.3			3	R.CM.2		
30	2	R.NT.4			2	R.CM.1			2	R.NT.4			3	R.NT.4	R.CM.3		2	R.NT.4			1	R.IT.3		
31	2	R.CM.1			2	R.CM.1			1	R.CM.2			2	R.CM.2	R.CM.3		2	R.CM.2			1	R.WS.2		
32	1	R.IT.1			1	R.IT.1			1	R.IT.1			2	R.IT.1			1	R.IT.1			1	R.IT.1		
33	2	R.IT.3			1	R.IT.3			2	R.IT.3			2	R.IT.1			2	R.IT.3			1	R.IT.3		
34	1	R.CM.2			1	R.IT.3			2	R.IT.3			2	R.IT.3			1	R.IT.3			1	R.IT.3		
35	2	R.CM.1			2	R.CM.1			2	R.CM.1			3	R.CM.1			1	R.CM.2			1	R.CM.2		
36	3	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.2			2	R.CM.1			2	R.CM.2		
37	2	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.2			1	R.CM.1			2	R.CM.1		
38	2	R.CM.2			2	R.CM.1			1	R.CM.2			3	R.CM.1			2	R.CM.2			2	R.CM.2		
39																								
40																								
41																								
42																								
43																								
44																								
45																								
46																								
47																								
48																								
49																								
50																								
51	3	W.PR.3	W.GN.1	W.PR.5	3	W.PR.2	W.PR.1	R.CS.1	3	W.GN.1	W.PR.3	W.PR.5	3	W.PR	R.CM.3		3	W.PR.1			3	R.CM.1	W.PR.2	
52	2	R.NT.4			2	R.CM.1			2	R.CS.1	W.PR.4		2	R.CM.1	R.CM.3		2	W.PR.2			2	R.NT.2		
53	2	W.ST.1	R.NT.4		2	R.IT.3			2	R.NT.4			3	R.NT.4			1	W.GR.1			2	R.NT.4		

Table 5.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 5 Language Arts

54	2	W.ST.1			2	W.PR.1			2	R.NT.4			3	R.NT.4			1	W.GR.1			2	R.NT.4		
55	2	W.PR.2			2	R.CM.1			2	W.PR.2			2	R.CM.1			1	W.GR.1			2	W.PR.2		
56	1	W.SP.1			1	W.GR.1			1	W.SP.1			1	R.WS.1			1	W.GR.1			1	W.SP.1		
57	2	W.PR.3	W.PR.2		3	W.PR.1	W.PR.2	R.CS.1	3	W.PR.3	W.PR.5		2	W.PR.1			3	W.PR.1			3	W.PR.1		

Item	DOK 6	PObj6	S1Obj 6	DOK 7	PObj7	DOK 8	PObj8	S1Obj 8	S2Obj 8	DOK 9	PObj9	S1Obj 9	DOK 10	PObj10	S1Obj 10	S2Obj 10	DOK 11	PObj11	S1Obj 11	S2Obj 11
1	2	R.CM.3		2	R.CM.3	3	R.CM.1			2	R.CM.1		3	R.CM.3			3	R.IT.1		
2	1	R.CM.2		2	R.CM.1	3	R.CM.1			2	R.CM.1		3	R.CM.1			3	R.CM.1		
3	2	R.NT.3		2	R.NT.4	2	R.CM.1			2	R.IT.3		2	R.CM.2			1	R.CM.1		
4	1	W.GR.1		1	R.NT.4	2	R.IT.3			2	R.IT.3		1	W.GR.1			3	R.IT.3		
5	1	R.IT.3		1	R.IT.3	1	R.CM.2			1	R.CM.2		1	R.CM.2			3	R.IT.3		
6	1	R.CM.2		1	R.CM.2	2	R.CM.1			1	R.CM.2		1	R.CM.2			1	R.CM.2		
7	1	R.IT.3		2	R.IT.1	2	R.IT.3			1	R.IT.3		2	R.IT.3			2	R.IT.2		
8	1	R.IT.3		1	R.CM.2	2	R.IT.3			2	R.IT.3		1	R.IT.3			2	R.IT.3		
9	2	R.CM.3		2	R.CM.2	3	R.CM.1			1	R.CM.2		3	R.CM.3			2	R.WS.3		
10	2	R.CM.1		2	R.CM.1	3	R.CM.1			2	R.CM.1		3	R.CM.3			3	R.IT.3		
11	2	R.NT.4		2	R.NT.4	3	R.NT.3			2	R.IT.1		3	R.NT.4			2	R.IT.3		
12	1	R.CM.2		1	R.CM.2	2	R.CM.2			2	R.CM.1		2	R.CM.2			1	R.CM.2		
13	2	R.CM.1		1	R.CM.2	2	R.CM.1			2	R.CM.3		2	R.CM.3			1	R.CM.2		
14	1	R.CM.2		1	R.CM.2	2	R.CM.2			2	R.CM.1		3	R.NT.1			1	R.CM.2		
15	1	R.CM.2		1	R.CM.2	2	R.CM.2			1	R.CM.2		3	R.CM.2			1	R.CM.2		
16	1	R.CM.2		1	R.CM.2	3	R.CM.1			2	R.CM.1		3	R.CM.2			1	R.CM.2		
17	3	R.CM.3		2	R.CM.3	3	R.CM.3			2	R.CM.3		3	R.CM.3			3	R.CM.1		
18	3	R.CM.3		2	R.NT.4	3	R.CM.3			2	R.IT.3		3	R.CM.3			2	R.CM.3		

Table 5.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 5 Language Arts

19	3	R.CM.3		2	R.CM.3	2	R.CM.2			2	R.CM.3		3	R.CM.3			3	R.CM.3		
20	2	R.CM.3		2	R.CM.1	3	R.CM.1	R.WS.2		2	R.CM.1		3	R.CM.3			2	R.CM.1		
21	3	R.CM.3		2	R.CM.1	3	R.CM.3			2	R.CM.3		3	R.CM.3			2	R.CM.1		
22	3	R.CS.1		4	R.CM.3	3	R.CM.3	R.NT.1		3	R.CM.1	R.CM.3	3	W.PR.1	W.PR.3		3	W.PR.3		
23	1	R.NT.2		2	R.NT.2	1	R.NT.2			1	R.NT.2		1	R.NT.2			2	R.NT.2		
24	2	R.NT.4		2	R.NT.4	2	R.NT.4			2	R.NT.4		1	R.NT.4			3	R.NT.4		
25	2	R.NT.2		2	R.NT.4	2	R.NT.4			2	R.NT.4		1	R.NT.2	R.NT.4		2	R.NT.4		
26	2	R.NT.4		2	R.NT.4	2	R.NT.4			2	R.NT.4		1	R.NT.4			1	R.NT.4		
27	2	R.NT.3		2	R.CM.1	3	R.CM.1			2	R.CM.1		2	R.CM.2			3	R.NT.3		
28	2	R.WS.1		2	R.WS.3	2	R.WS.3			2	R.WS.3		2	R.WS.3			1	R.WS.3		
29	2	R.NT.4		2	R.CM.3	3	R.CM.1	R.IT.3	R.NT.4	2	R.WS.3		3	R.NT.4			3	R.NT.3		
30	3	R.NT.4		2	R.NT.4	3	R.NT.4			2	R.NT.4		3	R.NT.4			3	R.NT.4		
31	1	R.WS.2		2	R.CM.3	3	R.IT.3			1	R.CM.2		1	R.CM.2			1	R.CM.2		
32	1	R.IT.1		1	R.IT.1	1	R.IT.1			2	R.IT.1		1	R.IT.1			1	R.IT.1		
33	1	R.IT.3		2	R.IT.1	2	R.CM.2			2	R.IT.3		1	R.IT.3	R.IT.1		1	R.IT.1		
34	1	R.IT.3		1	R.CM.2	2	R.IT.3			2	R.IT.3		1	R.IT.3			1	R.IT.1		
35	1	R.CM.2		2	R.CM.2	2	R.CM.2			2	R.CM.1		2	R.CM.2			1	R.CM.2		
36	2	R.CM.2		2	R.CM.2	2	R.CM.2			2	R.CM.1		2	R.CM.2			1	R.CM.2		
37	2	R.CM.1		2	R.CM.2	3	R.CM.1			2	R.CM.1		3	R.CM.1			3	R.CM.1		
38	2	R.CM.2		2	R.CM.2	3	R.CM.1			2	R.CM.2		3	R.CM.2			1	R.CM.2		
39																				
40																				
41																				
42																				
43																				
44																				
45																				
46																				
47																				
48																				
49																				

Table 5.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 5 Language Arts

50																			
51	3	W.PR.1	W.PR.5	4	W.GN.1	3	W.GN.1	W.PR.2		3	W.PR.2		3	W.PR.1	W.PR.3		3	W.GN.1		
52	2	R.NT.4		1	W.PR.4	2	R.NT.4			2	W.PR.4		3	W.PR.1			2	W.PR.2		
53	2	R.IT.3		2	R.NT.4	2	R.NT.4			2	R.NT.4		2	W.PR.1	R.NT.4		3	R.NT.4		
54	2	R.NT.4		2	R.NT.4	2	W.PR.1			2	R.NT.4		3	W.PR.1			3	W.PR.3		
55	1	R.IT.3		2	R.CM.3	2	W.PR.2			2	W.PR.2		2	W.PR.2			1	W.PR.2		
56	1	W.SP.1		1	W.SP.1	1	W.GR.1			1	W.SP.1		1	W.SP.1			3	W.PR.2		
57	2	R.CM.3		3	W.PR.4	3	R.CM.1	W.PR.1		3	R.CS.1	W.PR.4	3	W.PR.1	W.PR.3	W.GN.2	3	W.PR.1		

Pairwise Comparison: 0.4741
Standard Pairwise Comparison: 0.9168

Table 5.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 5 Language Arts

Low		Medium		High
0		10.4386		24

1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CS.1	R.IT.1	R.IT.1	R.IT.1
	R.IT.3	R.IT.3								
2	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1
	R.CM.2	R.CM.2	R.IT.3	R.NT.4						
3	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.4	R.IT.3	R.IT.3
	R.IT.3	R.NT.3	R.NT.4							
4	R.CM.1	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.NT.4	R.NT.4	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
5	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.IT.1	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3								
6	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
7	R.CM.1	R.IT.1	R.IT.1	R.IT.2	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3								
8	R.CM.2	R.CM.2	R.IT.2	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3
	R.IT.3	R.IT.3	R.IT.3							
9	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3
	R.CM.3	R.WS.3								
10	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3
	R.IT	R.N								

Table 5.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 5 Language Arts

	.3	T.2								
11	R.IT .1	R.IT .3	R.IT .3	R.IT .3	R.IT .3	R.N T.3	R.N T.4	R.N T.4	R.N T.4	R.N T.4
	R.N T.4	R.N T.4								
12	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
13	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.3
	R.C M.3	R.N T.3								
14	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.N T.1								
15	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
16	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
17	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.C M.3	R.C M.4							
18	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.IT .1
	R.IT .1	R.IT .3	R.N T.2	R.N T.4						
19	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.C M.3	R.C M.3							
20	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.C M.3	R.W S.2							
21	R.C M.1	R.C M.1	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3

Table 5.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 5 Language Arts

	R.CM.3	R.CM.3								
22	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CS.1	R.CS.1	R.CS.1	R.NT.1
	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.3	W.PR.3	
	W.PR.3	W.PR.3	W.PR.5	W.GN.2	W.GR.1					
23	R.IT.1	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2
	R.NT.2	R.NT.2								
24	R.CM.2	R.CM.3	R.IT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	R.NT.4	R.NT.4						
25	R.NT.2	R.NT.2	R.NT.2	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	R.NT.4							
26	R.NT.2	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.WS.3	W.PR.1								
27	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.NT.3								
28	R.WS.1	R.WS.1	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	R.WS.3	R.WS.3							
29	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.CM.3	R.IT.3	R.NT.3	R.NT.3
	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.WS.3				
30	R.CM.1	R.CM.3	R.IT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	R.NT.4							
31	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.CM.3
	R.IT	R.W	R.W							

Table 5.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 5 Language Arts

	.3	S.2	S.2							
32	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1
	R.IT .1	R.IT .1								
33	R.C M.2	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .3	R.IT .3	R.IT .3	R.IT .3	R.IT .3
	R.IT .3	R.IT .3	R.IT .3							
34	R.C M.2	R.C M.2	R.IT .1	R.IT .3	R.IT .3	R.IT .3	R.IT .3	R.IT .3	R.IT .3	R.IT .3
	R.IT .3	R.IT .3								
35	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
36	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
37	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1
	R.C M.2	R.C M.2								
38	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.C M.2								
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	R.C M.1	R.C M.3	R.C S.1	W.P R	W.P R.1	W.P R.1	W.P R.1	W.P R.1	W.P R.2	W.P R.2

Table 5.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 5 Language Arts

	W.PR.2	W.PR.2	W.PR.3	W.PR.3	W.PR.3	W.PR.5	W.PR.5	W.PR.5	W.GN.1	
	W.GN.1	W.GN.1	W.GN.1	W.GN.1						
52	R.CM.1	R.CM.1	R.CM.3	R.CS.1	R.NT.2	R.NT.4	R.NT.4	R.NT.4	W.PR.1	W.PR.2
	W.PR.2	W.PR.4	W.PR.4	W.PR.4						
53	R.IT.3	R.IT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	W.PR.1	W.ST.1	W.GR.1						
54	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	W.PR.1	W.PR.1	W.PR.1	W.PR.3
	W.ST.1	W.GR.1								
55	R.CM.1	R.CM.1	R.CM.3	R.IT.3	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2
	W.PR.2	W.GR.1								
56	R.WS.1	W.PR.2	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.GR.1
	W.GR.1	W.GR.1								
57	R.CM.1	R.CM.3	R.CS.1	R.CS.1	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.1
	W.PR.1	W.PR.2	W.PR.2	W.PR.3	W.PR.3	W.PR.3	W.PR.4	W.PR.4	W.PR.5	
	W.GN.2									

Table 5.10
Items Coded by Reviewers to Each Objective
Michigan Grade 5 Language Arts

Low		Medium		High
0		14.875		110

R																				
R.CM																				
R.CM.1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	4	6
	7	9	9	9	9	9	10	10	10	10	10	10	10	10	12	13	13	13	13	
	13	14	14	14	16	16	16	16	16	16	17	18	19	20	20	20	20	21	21	
	22	22	27	27	27	27	27	27	29	29	29	29	30	31	31	35	35	35	35	
	35	36	36	36	36	36	37	37	37	37	37	37	37	37	37	37	38	38	38	
	51	52	52	55	55	57														
R.CM.2	2	2	3	3	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6
	8	8	9	9	9	9	10	12	12	12	12	12	12	12	12	12	12	12	13	
	13	13	13	14	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15	
	15	15	15	15	16	16	16	16	16	16	17	18	19	19	19	24	27	29	31	
	31	31	31	31	31	33	34	34	35	35	35	35	35	35	35	36	36	36	36	
	36	36	36	37	37	38	38	38	38	38	38	38	38	38						
R.CM.3	1	1	1	9	9	10	13	13	17	17	17	17	17	17	17	17	17	17	18	18
	18	18	18	18	18	19	19	19	19	19	19	19	19	19	20	20	20	20	20	
	20	20	20	21	21	21	21	21	21	21	21	21	21	22	22	22	22	24	29	
	29	30	31	31	51	52	55	57												
R.CM.4	3	17																		
R.CS																				
R.CS.1	1	22	22	22	51	52	57	57												
R.IT																				
R.IT.1	1	1	1	5	7	7	11	18	18	23	32	32	32	32	32	32	32	32	32	32
	32	32	33	33	33	33	34													
R.IT.2	7	8																		
R.IT.3	1	1	2	3	3	3	4	4	4	4	4	5	5	5	5	5	5	7	7	7
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	10	11	11	11	
	11	18	24	29	30	31	33	33	33	33	33	33	33	33	34	34	34	34	34	
	34	34	34	34	53	53	55													

Table 5.10
Items Coded by Reviewers to Each Objective
Michigan Grade 5 Language Arts

R.NT																			
R.NT.1	14	22																	
R.NT.2	10	18	23	23	23	23	23	23	23	23	23	23	23	25	25	25	26	52	
R.NT.3	3	11	13	24	27	27	27	27	27	29	29								
R.NT.4	2	3	4	4	11	11	11	11	11	11	18	24	24	24	24	24	24	24	24	24
	24	25	25	25	25	25	25	25	25	25	25	26	26	26	26	26	26	26	26
	26	29	29	29	29	29	30	30	30	30	30	30	30	30	30	30	52	52	52
	53	53	53	53	53	53	53	53	53	54	54	54	54	54	54				
R.WS																			
R.WS.1	28	28	56																
R.WS.2	20	31	31																
R.WS.3	9	26	28	28	28	28	28	28	28	28	28	28	28	29					
W																			
W.PR	22	51																	
W.PR.1	22	22	22	22	26	51	51	51	51	52	53	54	54	54	57	57	57	57	57	57
	57																		
W.PR.2	22	22	51	51	51	51	52	52	55	55	55	55	55	55	55	56	57	57	
W.PR.3	22	22	22	22	51	51	51	54	57	57	57								
W.PR.4	52	52	52	57	57														
W.PR.5	22	51	51	51	57														
W.GN																			
W.GN.1	51	51	51	51	51														
W.GN.2	22	57																	
W.HW																			

Table 5.10
Items Coded by Reviewers to Each Objective
Michigan Grade 5 Language Arts

W.HW.1											
W.SP											
W.SP.1	56	56	56	56	56	56	56				
W.ST											
W.ST.1	53	54									
W.GR											
W.GR.1	4	4	4	4	22	53	54	55	56	56	56

Table 5.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 5 Language Arts

Low		Medium		High
1		6		12

R													
R.CM													
R.CM.1	1:3	2:10	3:5	4:1	6:1	7:1	9:5	10:8	12:1	13:5	14:3	16:6	17:1
	18:1	19:1	20:4	21:2	22:2	27:6	29:4	30:1	31:2	35:5	36:5	37:10	38:3
	51:1	52:2	55:2	57:1									
R.CM.2	2:2	3:2	5:5	6:11	8:2	9:4	10:1	12:11	13:4	14:8	15:12	16:6	17:1
	18:1	19:3	24:1	27:1	29:1	31:6	33:1	34:2	35:7	36:7	37:2	38:9	
R.CM.3	1:3	9:2	10:1	13:2	17:10	18:7	19:9	20:8	21:10	22:4	24:1	29:2	30:1
	31:2	51:1	52:1	55:1	57:1								
R.CM.4	3:1	17:1											
R.CS													
R.CS.1	1:1	22:3	51:1	52:1	57:2								
R.IT													
R.IT.1	1:3	5:1	7:2	11:1	18:2	23:1	32:12	33:4	34:1				
R.IT.2	7:1	8:1											
R.IT.3	1:2	2:1	3:3	4:5	5:6	7:8	8:10	10:1	11:4	18:1	24:1	29:1	30:1
	31:1	33:8	34:9	53:2	55:1								
R.NT													
R.NT.1	14:1	22:1											
R.NT.2	10:1	18:1	23:11	25:3	26:1	52:1							
R.NT.3	3:1	11:1	13:1	24:1	27:5	29:2							
R.NT.4	2:1	3:1	4:2	11:6	18:1	24:10	25:10	26:9	29:5	30:10	52:3	53:9	54:6
R.W													

Table 5.11

Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 5 Language Arts

S							
R.WS.1	28:2	56:1					
R.WS.2	20:1	31:2					
R.WS.3	9:1	26:1	28:11	29:1			
W							
W.PR	22:1	51:1					
W.PR.1	22:4	26:1	51:4	52:1	53:1	54:3	57:7
W.PR.2	22:2	51:4	52:2	55:7	56:1	57:2	
W.PR.3	22:4	51:3	54:1	57:3			
W.PR.4	52:3	57:2					
W.PR.5	22:1	51:3	57:1				
W.GN							
W.GN.1	51:5						
W.GN.2	22:1	57:1					
W.HW							
W.HW.1							
W.SP							
W.SP.1	56:7						
W.ST							
W.ST.1	53:1	54:1					
W.GR							
W.GR.1	4:4	22:1	53:1	54:1	55:1	56:3	

Table 5.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 5 Language Arts

Low DOK		Matched DOK		High DOK
1		6		12

R [2]:													
R.CM [3]:													
R.CM.1 [3]:	1:3[2]	2:10 [2.5]	3:5[1.8]	4:1[2]	6:1[2]	7:1[2]	9:5[2.2]	10:8 [2.12]	12:1 [2]	13:5 [1.6]	14:3 [1.67]	16:6 [2.33]	17:1 [3]
	18:1 [3]	19:1 [3]	20:4 [2.25]	21:2 [2]	22:2 [3]	27:6 [2]	29:4 [2.75]	30:1 [2]	31:2 [2]	35:5 [2.2]	36:5 [2.2]	37:10[2.2]	38:3 [2.67]
	51:1 [3]	52:2 [2]	55:2 [2]	57:1 [3]									
R.CM.2 [2]:	2:2[1.5]	3:2[1.5]	5:5[1]	6:11 [1]	8:2[1.5]	9:4[1.25]	10:1 [2]	12:11[1.18]	13:4 [1]	14:8 [1.25]	15:12[1.25]	16:6 [1.33]	17:1 [3]
	18:1 [3]	19:3 [2]	24:1 [2]	27:1 [2]	29:1 [3]	31:6 [1.33]	33:1 [2]	34:2 [1]	35:7 [1.43]	36:7 [1.86]	37:2 [2]	38:9 [1.89]	
R.CM.3 [3]:	1:3[2.33]	9:2[2.5]	10:1 [3]	13:2 [2]	17:10[2.5]	18:7 [2.57]	19:9 [2.56]	20:8 [2.38]	21:10[2.3]	22:4 [3.25]	24:1 [2]	29:2 [2.5]	30:1 [3]
	31:2 [2]	51:1 [3]	52:1 [2]	55:1 [2]	57:1 [2]								
R.CM.4 [2]:	3:1[3]	17:1 [3]											
R.CS [3]:													
R.CS.1 [3]:	1:1[2]	22:3 [3]	51:1 [3]	52:1 [2]	57:2 [3]								
R.IT [2]:													
R.IT.1 [1]:	1:3[2]	5:1[1]	7:2[1.5]	11:1 [2]	18:2 [1.5]	23:1 [1]	32:12[1.17]	33:4 [1.5]	34:1 [1]				

Table 5.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 5 Language Arts

R.IT.2 [2]:	7:1[2]	8:1[2]											
R.IT.3 [2]:	1:2[2]	2:1[3]	3:3[2.33]	4:5[2.2]	5:6[1.5]	7:8[1.62]	8:10 [1.6]	10:1 [3]	11:4 [2.25]	18:1 [2]	24:1 [1]	29:1 [3]	30:1 [1]
	31:1 [3]	33:8 [1.5]	34:9 [1.44]	53:2 [2]	55:1 [1]								
R.NT [3]:													
R.NT.1 [3]:	14:1 [3]	22:1 [3]											
R.NT.2 [1]:	10:1 [2]	18:1 [2]	23:11[1.18]	25:3 [1.67]	26:1 [2]	52:1 [2]							
R.NT.3 [3]:	3:1[2]	11:1 [3]	13:1 [2]	24:1 [2]	27:5 [2.2]	29:2 [2.5]							
R.NT.4 [3]:	2:1[3]	3:1[2]	4:2[1]	11:6 [2.17]	18:1 [2]	24:10[1.9]	25:10[1.9]	26:9 [1.78]	29:5 [2.6]	30:10[2.5]	52:3 [2]	53:9 [2.22]	54:6 [2.17]
R.WS [2]:													
R.WS.1 [2]:	28:2 [2]	56:1 [1]											
R.WS.2 [1]:	20:1 [3]	31:2 [1]											
R.WS.3 [2]:	9:1[2]	26:1 [2]	28:11[1.64]	29:1 [2]									
W [3]:													
W.PR [3]:	22:1 [3]	51:1 [3]											
W.PR.1	22:4 [3]	26:1 [1]	51:4 [3]	52:1 [3]	53:1 [2]	54:3 [2.3	57:7 [2.8						

Table 5.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 5 Language Arts

[3]:						3]	6]
W.PR.2 [2]:	22:2 [3]	51:4 [3]	52:2 [2]	55:7 [1.86]	56:1 [3]	57:2 [2.5]	
W.PR.3 [3]:	22:4 [3]	51:3 [3]	54:1 [3]	57:3 [2.67]			
W.PR.4 [3]:	52:3 [1.67]	57:2 [3]					
W.PR.5 [2]:	22:1 [3]	51:3 [3]	57:1 [3]				
W.GN [3]:							
W.GN.1 [3]:	51:5 [3.2]						
W.GN.2 [3]:	22:1 [3]	57:1 [3]					
W.HW [1]:							
W.HW.1 [1]:							
W.SP [1]:							
W.SP.1 [1]:	56:7 [1]						
W.ST [3]:							
W.ST.1 [3]:	53:1 [2]	54:1 [2]					
W.GR [1]:							

Table 5.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 5 Language Arts

W.GR.1 [1]:	4:4[1]	22:1 [3]	53:1 [1]	54:1 [1]	55:1 [1]	56:3 [1]

Table 6.1
Categorical Concurrence Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 6 Language Arts
Number of Assessment Items - 45

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	15.17	1 2 3	1 9 5	6 60 33	41.67	4.09	YES
W - Writing	6	11.08	1 2 3 4	2 3 4 2	18 27 36 18	9.08	2.53	YES
Total	11	26.25	1 2 3 4	3 12 9 2	11 46 34 7	50.75	4.21	

Table 6.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Twelve Reviewers
Michigan Grade 6 Language Arts
Number of Assessment Items - 45

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	15.17	41.67	4.09	43	42	53	42	5	18	YES
W - Writing	6	11.08	9.08	2.53	34	43	54	45	13	30	YES
Total	11	26.25	50.75	4.21	40	43	53	43	7	23	

Table 6.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Twelve Reviewers

Michigan Grade 6 Language Arts

Number of Assessment Items - 45

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	15.17	41.67	4.09	11.17	1.40	74	8	YES	82	5	0.67	0.04	WEAK
W - Writing	6	11.08	9.08	2.53	4.92	0.86	44	7	WEAK	18	5	0.81	0.06	YES
Total	11	26.25	50.75	4.21	8.04	3.34	59	17		50	32	0.74	0.08	

Table 6.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Twelve Reviewers
Michigan Grade 6 Language Arts
Number of Assessment Items - 45

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES

Table 6.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 6 Language Arts

Item Number	Comments by Reviewer
32	See note.
53	There is a mistake in this item. The sentence referred to in the distractors is sentence 15 rather than sentence 16.
53	This is a bad question. The distractors are not on line 16, therefore eliminating those as choices.
56	Confusing question. Is the purpose to find if students know grammatical errors or is the purpose for them to be able to locate the correct line of text. Having difficulty locating the line, would make getting the correct answer very difficult

Table 6.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 6 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9	Rater 10	Rater 11	Rater 12
1	2	1	1	2	1	1	1	1	2	1	2	2
2	2	2	2	3	2	2	2	2	3	2	3	3
3	2	2	2	2	2	1	2	3	2	2	2	3
4	3	2	2	2	2	2	2	2	1	2	2	3
5	1	1	2	2	1	1	1	2	2	2	2	1
6	1	1	1	3	1	1	1	1	2	1	2	1
7	2	2	2	2	2	1	2	2	3	2	3	1
8	2	2	2	3	1	2	2	2	3	2	3	2
9	2	2	2	2	2	2	2	2	2	2	2	1
10	2	2	2	2	2	2	2	2	3	2	3	2
11	1	2	1	1	1	1	1	1	2	2	2	1
12	1	2	2	2	2	1	2	2	2	2	3	3
13	2	2	2	2	2	1	2	2	3	2	3	3
14	2	2	2	2	2	2	2	2	2	2	2	3
15	2	2	1	3	2	1	2	2	2	2	3	2
16	1	1	1	1	1	1	1	2	2	2	1	1
17	3	2	2	3	2	2	2	2	3	2	3	3
18	3	2	2	3	2	2	2	2	3	2	3	1
19	3	2	2	3	2	2	2	2	3	2	3	1
20	3	3	2	3	3	3	2	2	3	2	3	3
21	2	3	2	3	2	2	2	2	3	2	3	3
22	3	3	3	3	3	3	3	4	3	3	3	3
23	2	2	1	2	2	2	1	2	2	2	2	1
24	2	2	1	1	1	1	2	1	2	2	2	1
25	1	2	2	2	1	1	2	2	1	2	3	1
26	2	2	2	1	1	1	1	1	2	2	2	1
27	2	2	2	2	2	1	2	2	2	2	3	3
28	1	2	2	1	2	1	2	2	2	2	3	3
29	3	2	1	3	1	2	2	2	2	2	3	2
30	2	2	1	3	2	2	3	2	2	2	3	3
31	1	1	1	1	1	1	1	1	2	2	1	2
32	1	2	2	2	2	2	2	2	2	2	2	3
33	2	2	2	3	1	2	2	2	2	2	2	3
34	2	2	2	2	1	2	2	2	2	2	2	2
35	1	2	2	2	2	2	2	2	2	2	3	3
36	2	2	1	2	1	1	1	2	1	2	1	1
37	3	2	2	3	2	3	3	2	3	2	3	3
38	2	2	2	3	2	1	3	2	3	2	3	3
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51	3	3	3	3	3	3	3	4	3	3	3	3
52	2	2	2	2	1	1	2	4	2	2	2	1

Table 6.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 6 Language Arts

53	2	2	1	1	2	1	1	1	1	2	2	2
54	2	2	2	2	3	2	2	2	2	2	2	1
55	2	2	2	2	2	2	3	2	2	2	2	3
56	2	2	2	1	2	1	2	2	2	2	2	1
57	3	3	3	3	3	3	3	4	3	3	3	3

Intraclass Correlation: 0.909
Pairwise Comparison: 0.5492

Table 6.7
Notes by Reviewer
Michigan Grade 6 Language Arts

Item Number	Comments by Reviewer
7	consider that more than one answer can be correct. Also all answers are general rather than what the story leads up to -- riding a horse in a rodeo. Should some responses lead to to the same idea of what the story is leading up to (specific) or the general?
19	a "stretch" to make the connection
20	Very difficultitem. I think a case could be made for three of the answers.
20	One distractor appears to be a reasonable answer, so took more thinking
20	misleading -- two possible answers could be considered correct; would take a long time to think through to the intended answer
32	Bad item. The distractors are too obviously incorrect to be plausible. The "correct" answer erroneously states the situation.
32	Responses are confusing. None of the responses are really correct if the reader is accurately reading "One picture puzzle piece"
33	Relationship between standard and item is not very evident. Alliteration can be a characteristic of all language, but is not clearly found in the standards.

Table 6.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 6 Language Arts

Item	DOK0	PObj0	S1Obj0	S2Obj0	DOK1	PObj1	S1Obj1	S2Obj1	DOK2	PObj2	S1Obj2	S2Obj2	DOK3	PObj3	S1Obj3	S2Obj3	DOK4	PObj4	S1Obj4	S2Obj4	DOK5	PObj5	S1Obj5	S2Obj5
1	2	R.WS.1			1	R.WS.1			1	R.WS.1			2	R.WS.1			1	R.WS.1			1	W.SP.1		
2	2	R.CS.1			2	R.CS.1			2	R.CS.1			3	R.CS.1			2	R.CS.1			2	R.CS.1		
3	2	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2			1	R.CM.2		
4	3	R.CM.1			2	R.WS.2	R.CM.1		2	R.NT.3			2	R.CM.2			2	R.NT.3			2	R.NT.3		
5	1	R.CM.2			1	R.CM.1			2	R.NT.3			2	R.CM.1			1	R.CM.2			1	R.NT.3		
6	1	R.CM.2			1	R.CM.2			1	R.CM.2			3	R.NT.3			1	R.CM.2			1	R.CM.2		
7	2	R.CM.1			2	R.CM.1			2	R.NT.3			2	R.CM	R.CM.2		2	R.NT.3			1	R.CM.2		
8	2	R.IT.3			2	R.CM.1			2	R.NT.3			3	R.CS.1			1	R.CS.1			2	R.NT.2		
9	2	R.WS.3			2	W.PR.1			2	R.WS.3			2	R.WS.1	R.WS.2		2	R.WS.3			2	R.WS.3		
10	2	R.NT.3			2	R.NT.1			2	R.NT.3			2	R.CM.1			2	R.NT.4			2	R.CM.3		
11	1	R.CM.2			2	R.CM.1			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
12	1	R.CM.2			2	R.NT.3			2	R.NT.3			2	R.CM.2			2	R.CM.2			1	R.NT.1		
13	2	R.NT.3			2	R.CM.1			2	R.NT.3			2	R.CM.2			2	R.NT.3			1	R.CM.2		
14	2	R.NT.3			2	R.CM.1			2	R.NT.3			2	R.CM.3			2	R.CS.1			2	R.CS.1		
15	2	R.CM.2			2	R.CM.1			1	R.CM.2			3	R.NT.4	R.CS.1		2	R.NT.3			1	R.CM.2		
16	1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
17	3	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3			2	R.CM.3			2	R.CM.3		
18	3	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3	R.CM.1		2	R.CM.3			2	R.CM.3		
19	3	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3			2	R.CM.3			2	R.NT.3		
20	3	R.CM.			3	R.CM.			2	R.CM.			3	R.CM.			3	R.CM.			3	R.CM.		

Table 6.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 6 Language Arts

		3				3				3				3				3				3		
21	2	R.CM.3			3	R.CM.3			2	R.CM.3			3	R.CM.3			2	R.CM.3			2	R.CM.3		
22	3	W.PR.3	W.GN.2		3	W.PR.2	W.PR.3	R.CS.1	3	W.GN.2	W.PR.5	W.PR.3	3	W.PR.1			3	W.PR	W.PR.1	W.PR.3	3	R.CM.1	W.PR.2	W.PR.3
23	2	R.WS.3			2	R.WS.1			1	R.WS.1			2	R.WS.1			2	R.WS.3			2	R.WS.3		
24	2	R.CM.2			2	R.CM.1			1	R.CM.2			1	R.CM.2			1	R.CM.2			1	R.CM.2		
25	1	R.CM.1			2	R.CM.1	R.WS.2		2	R.CM.1			2	R.WS.1	R.WS.2		1	R.NT.3			1	R.NT.3		
26	2	R.IT.1			2	R.IT.1			2	R.IT.1			1	R.IT.1			1	R.IT.1			1	R.NT.2		
27	2	R.IT.2			2	R.IT.2			2	R.IT.2			2	R.NT.4			2	R.CS.1			1	R.IT.2		
28	1	R.CM.2			2	R.CS.1			2	R.IT.2			1	R.CM.1			2	R.CM.2			1	R.CM.2		
29	3	R.CM.1			2	R.CS.1	R.NT.1		1	R.CM.2			3	R.CM			1	R.NT.3			2	R.NT.3		
30	2	R.CM.1			2	R.CS.1			1	R.CM.2			3	R.CS.1			2	R.CS.1			2	R.CS.1		
31	1	R.NT.2			1	R.IT.1			1	R.NT.2			1	R.NT.2			1	R.NT.2			1	R.NT.2		
32	1	R.NT.4			2	R.CM.1			2	R.NT.4			2	R.NT.3	R.CM.3	R.CM.2	2	R.NT.4			2	R.NT.4		
33	2	R.NT.4			2	R.IT.1			2	R.NT.4			3	R.NT.4			1	R.NT.4			2	R.NT.4		
34	2	R.NT.4			2	R.CS.1	R.IT.1		2	R.NT.4			2	R.NT.2			1	W.PR.1			2	R.IT.3	R.NT.4	
35	1	R.CM.2			2	R.CM.1			2	R.NT.3			2	R.CM.1			2	R.NT.3			2	R.NT.3		
36	2	R.WS.3			2	R.WS.1	R.WS.2		1	R.WS.3			2	R.WS.1	R.WS.3		1	R.WS.3			1	R.WS.1		
37	3	R.CM.1			2	R.CM.1			2	R.NT.4			3	R.NT.4	R.CM.3	R.CM.1	2	R.NT.3			3	R.CM.2		
38	2	R.CS.1			2	R.CS.1			2	R.CS.1			3	R.NT.1	R.CM.3		2	R.NT.4			1	R.IT.2		
39																								
40																								
41																								
42																								

Table 6.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 6 Language Arts

43																								
44																								
45																								
46																								
47																								
48																								
49																								
50																								
51	3	W.PR.3	W.PR.2	W.PR.5	3	W.PR.2	W.PR.3	R.CS.1	3	W.GN.1	W.PR.3	W.PR.5	3	W.PR.1			3	W.PR	W.PR.1	W.PR.3	3	R.CM.1	W.PR.2	W.PR.3
52	2	W.PR.5			2	W.GR.1			2	W.PR.4			2	W.GR.1			1	W.GR.1			1	W.GR.1		
53	2	W.GR.1			2	W.GR.1			1	W.GN.1			1	W.GR.1			2	W.GR.1			1	W.GR.1		
54	2	R.CS.1			2	W.PR.5			2	R.CS.1	W.PR.3		2	W.GR.1			3	W.PR.5			2	R.CS.1		
55	2	R.NT.4			2	R.CS.1			2	R.CS.1			2	R.NT.4			2	W.PS.1			2	R.CS.1		
56	2	W.PR.2			2	R.CM.1			2	W.PR.2			1	W.PR.2			2	R.NT.3			1	R.NT.2		
57	3	W.PR.3	R.CS.1	W.PR.2	3	W.PR.2	W.PR.3	R.CS.1	3	R.CS.1	W.PR.3		3	R.CS.1	R.NT.4	W.PR.4	3	W.PS.1			3	R.CS.1	R.NT.4	R.NT.3

Item	DOK 6	PObj6	S1Obj 6	S2Obj 6	DOK 7	PObj7	DOK 8	PObj8	S1Obj 8	DOK 9	PObj9	S1Obj 9	DOK 10	PObj10	S1Obj 10	S2Obj 10	DOK 11	PObj11	S1Obj 11	S2Obj 11
1	1	R.WS.1			1	R.WS.1	2	R.WS.1		1	R.WS.1		2	R.WS.1			2	R.WS.3		
2	2	R.CS.1			2	R.CM.1	3	R.CS.1		2	R.CS.1		3	R.CS.1			3	R.CS.1		
3	2	R.CM.2			3	R.CM.2	2	R.CM.2		2	R.CM.2		2	R.CM.2			3	R.CM.2		
4	2	R.NT.3			2	R.CM.3	1	R.WS.2		2	R.CM.1		2	R.CM.2			3	R.NT.3		
5	1	R.CM.2			2	R.CM.3	2	R.CM.2		2	R.CM.2		2	R.CM.2			1	R.CM.2		
6	1	R.CM.2			1	R.CM.2	2	R.CM.2		1	R.CM.2		2	R.CM.2			1	R.CM.2		
7	2	R.CM.3			2	R.CM.3	3	R.CM.1		2	R.CM.2		3	R.CM.3			1	R.CM.2		
8	2	W.GR.1			2	R.CS.1	3	R.NT.3		2	R.NT.4		3	R.CS.1			2	R.CS.1		

Table 6.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 6 Language Arts

9	2	R.WS.1			2	R.WS.3	2	R.WS.3		2	R.WS.3		2	R.WS.3			1	R.WS.3		
10	2	R.CM.3			2	R.CM.3	3	R.NT.3		2	R.CM.3		3	R.CM.3			2	R.CS.1		
11	1	R.CM.2			1	R.CM.2	2	R.NT.3		2	R.CM.2		2	R.CM.2			1	R.CM.2		
12	2	R.NT.3			2	R.CS.1	2	R.NT.3		2	R.CM.1		3	R.CS.1			3	R.CS.1		
13	2	R.CM.3			2	R.CM.3	3	R.CM.1		2	R.CM.2		3	R.CM.3			3	R.CM.1		
14	2	R.NT.3			2	R.CS.1	2	R.WS.3	R.NT.3	2	R.NT.3		2	R.CM.2			3	R.CS.1		
15	2	R.NT.4			2	R.CS.1	2	R.CM.2		2	R.NT.1		3	R.NT.3			2	R.CS.1		
16	1	R.CM.2			2	R.CM.2	2	R.NT.3		2	R.CM.2		1	R.CM.2			1	R.CM.2		
17	2	R.CM.3			2	R.CM.3	3	R.CM.3		2	R.NT.4		3	R.NT.4			3	R.CS.1		
18	2	R.CM.3			2	R.CM.3	3	R.CM.3		2	R.NT.3		3	R.CM.3			1	R.CM.2		
19	2	R.NT.4			2	R.CM.3	3	R.CM.1		2	R.NT.3		3	R.CM.3	R.NT.3		1	R.CM.2		
20	2	R.CM.3			2	R.CM.3	3	R.CM.2		2	R.CM.1		3	R.CM.3	R.CM.1		3	R.CM.1		
21	2	R.NT.3			2	R.NT.3	3	R.CM.1	R.NT.3	2	R.CM.3		3	R.NT.3			3	R.CM.3		
22	3	R.NT.4			4	W.GN.2	3	W.GN.1	W.GN.2	3	R.CM.3		3	W.PR.1	W.PR.2	W.PR.3	3	W.GN.2		
23	1	R.WS.1			2	W.GR.1	2	R.WS.3		2	R.WS.3		2	R.WS.3			1	R.WS.3		
24	2	R.CM.2	R.NT.3		1	R.CM.2	2	R.CM.2		2	R.CM.2		2	R.CM.2			1	R.CM.2		
25	2	R.NT.3			2	R.NT.3	1	R.WS.2		2	R.CM.1		3	R.NT.3			1	R.WS.3		
26	1	R.IT.1			1	R.IT.1	2	R.IT.1		2	R.IT.1		2	R.IT.1			1	R.IT.3		
27	2	R.CS.1			2	R.IT.2	2	R.IT.2		2	R.IT.2		3	R.NT.4			3	R.NT.2		
28	2	R.NT.4			2	R.CS.1	2	W.PR.3		2	R.IT.3		3	R.NT.4	R.CS.1		3	R.CS.1		
29	2	R.NT.2			2	R.NT.3	2	W.PR.3		2	R.CS.1		3	R.CS.1	R.NT.4		2	R.CS.1		
30	3	R.CS.1			2	R.NT.3	2	R.NT.4	W.PR.3	2	R.IT.3		3	R.CS.1	R.NT.4		3	R.CS.1		
31	1	R.NT.2			1	R.NT.2	2	R.NT.2		2	R.NT.2		1	R.NT.2			2	R.NT.2		
32	2	R.CS.1			2	R.NT.4	2	R.NT.4		2	R.NT.4		2	R.NT.4			3	R.NT.4		
33	2	R.WS.			2	R.CS.1	2	R.NT.4		2	R.NT.4		2	R.NT.2	R.NT.4		3	W.PS.		

Table 6.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 6 Language Arts

		3																1		
34	2	R.NT.4			2	R.NT.4	2	W.PR. 4		2	R.NT.4		2	R.NT.4			2	W.PR. 1		
35	2	R.NT.4			2	R.CM. 3	2	R.CM. 1		2	R.CM. 1		3	R.CM. 1			3	R.NT.3		
36	1	R.WS. 2			2	R.WS. 3	1	R.WS. 2		2	R.WS. 3		1	R.WS. 3			1	R.WS. 3		
37	3	R.CS.1			2	R.CS.1	3	R.CM. 1		2	R.CM. 1		3	R.CS.1			3	R.CM. 1		
38	3	R.CS.1			2	R.CM. 3	3	R.CS		2	R.CS.1		3	R.CS.1			3	R.CS.1		
39																				
40																				
41																				
42																				
43																				
44																				
45																				
46																				
47																				
48																				
49																				
50																				
51	3	W.PR. 1	W.PR. 2	W.PR. 3	4	W.GN. 1	3	W.GN. 1	W.GN. 2	3	W.PR. 2	W.GN. 1	3	W.PR. 1	W.PR. 3	W.PS. 1	3	W.GN. 1		
52	2	W.GR. 1			4	R.CS.1	2	W.PR. 3		2	W.GR. 1		2	W.GR. 1			1	W.PR. 5		
53	1	W.GR. 1			1	W.GR. 1	1	W.GR. 1		2	W.GR. 1		2	W.GR. 1			2	W.PR. 5		
54	2	W.PR. 5			2	R.CS.1	2	R.CM. 1		2	W.PR. 5		2	W.PR. 5			1	W.PR. 5		
55	3	R.CS.1			2	R.NT.3	2	R.NT.4		2	R.NT.4		2	R.NT.4			3	W.PR. 5		
56	2	R.IT.2			2	R.CM. 2	2	R.IT.2		2	W.PR. 2		2	W.PR. 2			1	W.PR. 5		
57	3	R.NT.4			4	R.CS.1	3	R.NT.4	W.GN. 2	3	W.GN. 2	R.NT.4	3	W.PR. 1	W.PR. 2	W.PR. 3	3	W.PR. 1		

Pairwise Comparison: 0.4059
Standard Pairwise Comparison: 0.9081

Table 6.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 6 Language Arts

Low		Medium		High
0		10.68421		28

1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.1
	R.WS.3	W.SP.1								
2	R.CM.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1
	R.CS.1	R.CS.1								
3	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2								
4	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.WS.2	R.WS.2							
5	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3
	R.NT.3	R.NT.3								
6	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.NT.3								
7	R.CM	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.CM.3
	R.CM.3	R.NT.3	R.NT.3							
8	R.CM.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.IT.3	R.NT.2	R.NT.3	R.NT.3
	R.NT.4	W.GR.1								
9	R.WS.1	R.WS.1	R.WS.2	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	R.WS.3	W.PR.1							
10	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CS.1	R.NT.1	R.NT.3	R.NT.3
	R.N	R.N								

Table 6.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 6 Language Arts

	T.3	T.4								
11	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.N T.3								
12	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C S.1	R.C S.1	R.C S.1	R.N T.1	R.N T.3	R.N T.3
	R.N T.3	R.N T.3								
13	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.N T.3
	R.N T.3	R.N T.3								
14	R.C M.1	R.C M.2	R.C M.3	R.C S.1	R.C S.1	R.C S.1	R.C S.1	R.N T.3	R.N T.3	R.N T.3
	R.N T.3	R.N T.3	R.W S.3							
15	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C S.1	R.C S.1	R.C S.1	R.N T.1	R.N T.3
	R.N T.3	R.N T.4	R.N T.4							
16	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2
	R.C M.2	R.N T.3								
17	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C S.1
	R.N T.4	R.N T.4								
18	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.C M.3	R.N T.3							
19	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.N T.3
	R.N T.3	R.N T.3	R.N T.4							
20	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.C M.3	R.C M.3							
21	R.C M.1	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.N T.3

Table 6.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 6 Language Arts

	R.NT.3	R.NT.3	R.NT.3							
22	R.CM.1	R.CM.3	R.CS.1	R.NT.4	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2
	W.PR.2	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.5	W.GN.1	
	W.GN.2	W.GN.2	W.GN.2	W.GN.2	W.GN.2					
23	R.WS.1	R.WS.1	R.WS.1	R.WS.1	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	W.GR.1								
24	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
	R.CM.2	R.CM.2	R.NT.3							
25	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.WS.1
	R.WS.2	R.WS.2	R.WS.2	R.WS.3						
26	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1
	R.IT.3	R.NT.2								
27	R.CS.1	R.CS.1	R.IT.2	R.IT.2	R.IT.2	R.IT.2	R.IT.2	R.IT.2	R.IT.2	R.NT.2
	R.NT.4	R.NT.4								
28	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.IT.2	R.IT.3
	R.NT.4	R.NT.4	W.PR.3							
29	R.CM	R.CM.1	R.CM.2	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.NT.1	R.NT.2	R.NT.3
	R.NT.3	R.NT.3	R.NT.4	W.PR.3						
30	R.CM.1	R.CM.2	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.IT.3
	R.NT.3	R.NT.4	R.NT.4	W.PR.3						
31	R.IT.1	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2
	R.N	R.N								

Table 6.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 6 Language Arts

	T.2	T.2								
32	R.CM.1	R.CM.2	R.CM.3	R.CS.1	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	R.NT.4	R.NT.4						
33	R.CS.1	R.IT.1	R.NT.2	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.WS.3	W.PS.1							
34	R.CS.1	R.IT.1	R.IT.3	R.NT.2	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	W.PR.1	W.PR.1	W.PR.4						
35	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.NT.3	R.NT.3	R.NT.3
	R.NT.3	R.NT.4								
36	R.WS.1	R.WS.1	R.WS.1	R.WS.2	R.WS.2	R.WS.2	R.WS.3	R.WS.3	R.WS.3	R.WS.3
	R.WS.3	R.WS.3	R.WS.3	R.WS.3						
37	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.CS.1	R.CS.1
	R.CS.1	R.NT.3	R.NT.4	R.NT.4						
38	R.CM.3	R.CM.3	R.CS	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1
	R.IT.2	R.NT.1	R.NT.4							
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	R.CM.1	R.CS.1	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.2

Table 6.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 6 Language Arts

	W.PR.2	W.PR.2	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.3	W.PR.3	
	W.PR.5	W.PR.5	W.GN.1	W.GN.1	W.GN.1	W.GN.1	W.GN.1	W.GN.2	W.PS.1	
52	R.CS.1	W.PR.3	W.PR.4	W.PR.5	W.PR.5	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
53	W.PR.5	W.GN.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1	W.GR.1								
54	R.CM.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	W.PR.3	W.PR.5	W.PR.5	W.PR.5	W.PR.5
	W.PR.5	W.PR.5	W.GR.1							
55	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4	R.NT.4
	W.PR.5	W.PS.1								
56	R.CM.1	R.CM.2	R.IT.2	R.IT.2	R.NT.2	R.NT.3	W.PR.2	W.PR.2	W.PR.2	W.PR.2
	W.PR.2	W.PR.5								
57	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.NT.3	R.NT.4	R.NT.4	R.NT.4
	R.NT.4	R.NT.4	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.2	W.PR.3	W.PR.3	
	W.PR.3	W.PR.3	W.PR.4	W.GN.2	W.GN.2	W.PS.1				

Table 6.10
Items Coded by Reviewers to Each Objective
Michigan Grade 6 Language Arts

Low		Medium		High
0		15.225		91

R																				
R.CM	7	29																		
R.CM.1	2	4	4	4	5	5	7	7	7	8	10	11	12	13	13	13	14	15	18	19
	20	20	20	21	22	24	25	25	25	25	28	29	30	32	35	35	35	35	35	
	37	37	37	37	37	37	51	54	56											
R.CM.2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	5	5	5	5	5	5
	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	11	11	11	
	11	11	11	11	11	11	11	12	12	12	13	13	13	14	15	15	15	15	16	
	16	16	16	16	16	16	16	16	16	16	18	19	20	24	24	24	24	24	24	
	24	24	24	24	24	28	28	28	29	30	32	35	37	56						
R.CM.3	4	5	7	7	7	10	10	10	10	10	13	13	13	14	17	17	17	17	17	17
	17	17	17	18	18	18	18	18	18	18	18	18	18	19	19	19	19	19	19	
	19	20	20	20	20	20	20	20	20	20	21	21	21	21	21	21	21	21	22	
	32	35	37	38	38															
R.CM.4																				
R.CS	38																			
R.CS.1	2	2	2	2	2	2	2	2	2	2	2	8	8	8	8	8	10	12	12	12
	14	14	14	14	15	15	15	17	22	27	27	28	28	28	28	29	29	29	29	
	30	30	30	30	30	30	30	32	33	34	37	37	37	38	38	38	38	38	38	
	38	51	52	54	54	54	54	55	55	55	55	57	57	57	57	57	57			
R.IT																				
R.IT.1	26	26	26	26	26	26	26	26	26	26	31	33	34							
R.IT.2	27	27	27	27	27	27	27	28	38	56	56									
R.IT.3	8	26	28	30	34															
R.NT																				
R.NT.1	10	12	15	29	38															
R.N	8	26	27	29	31	31	31	31	31	31	31	31	31	31	31	33	34	56		

Table 6.10
Items Coded by Reviewers to Each Objective
Michigan Grade 6 Language Arts

T.2																				
R.NT.3	4	4	4	4	4	5	5	6	7	7	8	8	10	10	10	11	12	12	12	12
	13	13	13	14	14	14	14	14	15	15	16	18	19	19	19	21	21	21	21	
	24	25	25	25	25	25	29	29	29	30	32	35	35	35	35	37	55	56	57	
R.NT.4	8	10	15	15	17	17	19	22	27	27	28	28	29	30	30	32	32	32	32	32
	32	32	32	32	33	33	33	33	33	33	33	33	34	34	34	34	34	34	34	
	35	37	37	38	55	55	55	55	55	57	57	57	57	57						
R.WS																				
R.WS.1	1	1	1	1	1	1	1	1	1	1	9	9	23	23	23	23	25	36	36	36
R.WS.2	4	4	9	25	25	25	36	36	36											
R.WS.3	1	9	9	9	9	9	9	9	9	9	14	23	23	23	23	23	23	23	25	33
	36	36	36	36	36	36	36	36												
W																				
W.PR	22	51																		
W.PR.1	9	22	22	22	34	34	51	51	51	51	57	57								
W.PR.2	22	22	22	51	51	51	51	51	56	56	56	56	56	57	57	57				
W.PR.3	22	22	22	22	22	22	28	29	30	51	51	51	51	51	51	51	52	54	57	57
	57	57																		
W.PR.4	34	52	57																	
W.PR.5	22	51	51	52	52	53	54	54	54	54	54	54	55	56						
W.GN																				
W.GN.1	22	51	51	51	51	51	53													
W.GN.2	22	22	22	22	22	51	57	57												
W.HW																				
W.H																				

Table 6.10
Items Coded by Reviewers to Each Objective
Michigan Grade 6 Language Arts

W.1																				
W.PS																				
W.PS.1	33	51	55	57																
W.GR																				
W.GR.1	8	23	52	52	52	52	52	52	52	53	53	53	53	53	53	53	53	53	53	54
W.SP																				
W.SP.1	1																			

Table 6.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 6 Language Arts

Low		Medium		High
1		6		12

R													
R.CM	7:1	29:1											
R.CM.1	2:1	4:3	5:2	7:3	8:1	10:1	11:1	12:1	13:3	14:1	15:1	18:1	19:1
	20:3	21:1	22:1	24:1	25:4	28:1	29:1	30:1	32:1	35:5	37:6	51:1	54:1
	56:1												
R.CM.2	3:12	4:2	5:7	6:11	7:4	11:10	12:3	13:3	14:1	15:4	16:11	18:1	19:1
	20:1	24:11	28:3	29:1	30:1	32:1	35:1	37:1	56:1				
R.CM.3	4:1	5:1	7:3	10:5	13:3	14:1	17:9	18:10	19:7	20:9	21:8	22:1	32:1
	35:1	37:1	38:2										
R.CM.4													
R.CS	38:1												
R.CS.1	2:11	8:5	10:1	12:3	14:4	15:3	17:1	22:1	27:2	28:4	29:4	30:7	32:1
	33:1	34:1	37:3	38:7	51:1	52:1	54:4	55:4	57:6				
R.IT													
R.IT.1	26:10	31:1	33:1	34:1									
R.IT.2	27:7	28:1	38:1	56:2									
R.IT.3	8:1	26:1	28:1	30:1	34:1								
R.NT													
R.NT.1	10:1	12:1	15:1	29:1	38:1								
R.NT.2	8:1	26:1	27:1	29:1	31:11	33:1	34:1	56:1					
R.NT.3	4:5	5:2	6:1	7:2	8:2	10:3	11:1	12:4	13:3	14:5	15:2	16:1	18:1
	19:3	21:4	24:1	25:5	29:3	30:1	32:1	35:4	37:1	55:1	56:1	57:1	
R.NT.4	8:1	10:1	15:2	17:2	19:1	22:1	27:2	28:2	29:1	30:2	32:9	33:8	34:7

Table 6.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 6 Language Arts

	35:1	37:2	38:1	55:5	57:5			
R.WS								
R.WS.1	1:10	9:2	23:4	25:1	36:3			
R.WS.2	4:2	9:1	25:3	36:3				
R.WS.3	1:1	9:9	14:1	23:7	25:1	33:1	36:8	
W								
W.PR	22:1	51:1						
W.PR.1	9:1	22:3	34:2	51:4	57:2			
W.PR.2	22:3	51:5	56:5	57:3				
W.PR.3	22:6	28:1	29:1	30:1	51:7	52:1	54:1	57:4
W.PR.4	34:1	52:1	57:1					
W.PR.5	22:1	51:2	52:2	53:1	54:6	55:1	56:1	
W.GN								
W.GN.1	22:1	51:5	53:1					
W.GN.2	22:5	51:1	57:2					
W.HW								
W.HW.1								
W.PS								
W.PS.1	33:1	51:1	55:1	57:1				
W.GR								
W.GR.1	8:1	23:1	52:7	53:10	54:1			
W.SP								
W.S	1:1							

Table 6.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 6 Language Arts

P.1	

Table 6.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 6 Language Arts

Low DOK		Matched DOK		High DOK
1		6		12

R [2]:													
R.CM [3]:	7:1[2]	29:1 [3]											
R.CM.1 [3]:	2:1[2]	4:3[2.33]	5:2[1.5]	7:3[2.33]	8:1[2]	10:1 [2]	11:1 [2]	12:1 [2]	13:3 [2.67]	14:1 [2]	15:1 [2]	18:1 [3]	19:1 [3]
	20:3 [2.67]	21:1 [3]	22:1 [3]	24:1 [2]	25:4 [1.75]	28:1 [1]	29:1 [3]	30:1 [2]	32:1 [2]	35:5 [2.2]	37:6 [2.67]	51:1 [3]	54:1 [2]
	56:1 [2]												
R.CM.2 [2]:	3:12 [2.08]	4:2[2]	5:7[1.43]	6:11 [1.18]	7:4[1.5]	11:10[1.2]	12:3 [1.67]	13:3 [1.67]	14:1 [2]	15:4 [1.5]	16:11[1.18]	18:1 [1]	19:1 [1]
	20:1 [3]	24:11[1.45]	28:3 [1.33]	29:1 [1]	30:1 [1]	32:1 [2]	35:1 [1]	37:1 [3]	56:1 [2]				
R.CM.3 [3]:	4:1[2]	5:1[2]	7:3[2.33]	10:5 [2.2]	13:3 [2.33]	14:1 [2]	17:9 [2.33]	18:10[2.4]	19:7 [2.43]	20:9 [2.67]	21:8 [2.38]	22:1 [3]	32:1 [2]
	35:1 [2]	37:1 [3]	38:2 [2.5]										
R.CM.4 [2]:													
R.CS [3]:	38:1 [3]												
R.CS.1 [3]:	2:11 [2.36]	8:5[2.2]	10:1 [2]	12:3 [2.67]	14:4 [2.25]	15:3 [2.33]	17:1 [3]	22:1 [3]	27:2 [2]	28:4 [2.5]	29:4 [2.25]	30:7 [2.57]	32:1 [2]
	33:1 [2]	34:1 [2]	37:3 [2.67]	38:7 [2.43]	51:1 [3]	52:1 [4]	54:4 [2]	55:4 [2.25]	57:6 [3.17]				
R.IT [2]:													

Table 6.13

Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])

Michigan Grade 6 Language Arts

R.IT.1 [2]:	26:10[1.6]	31:1[1]	33:1[2]	34:1[2]									
R.IT.2 [2]:	27:7[1.86]	28:1[2]	38:1[1]	56:2[2]									
R.IT.3 [2]:	8:1[2]	26:1[1]	28:1[2]	30:1[2]	34:1[2]								
R.NT [3]:													
R.NT.1 [3]:	10:1[2]	12:1[1]	15:1[2]	29:1[2]	38:1[3]								
R.NT.2 [2]:	8:1[2]	26:1[1]	27:1[3]	29:1[2]	31:11[1.27]	33:1[2]	34:1[2]	56:1[1]					
R.NT.3 [2]:	4:5[2.2]	5:2[1.5]	6:1[3]	7:2[2]	8:2[2.5]	10:3[2.33]	11:1[2]	12:4[2]	13:3[2]	14:5[2]	15:2[2.5]	16:1[2]	18:1[2]
	19:3[2.33]	21:4[2.5]	24:1[2]	25:5[1.8]	29:3[1.67]	30:1[2]	32:1[2]	35:4[2.25]	37:1[2]	55:1[2]	56:1[2]	57:1[3]	
R.NT.4 [3]:	8:1[2]	10:1[2]	15:2[2.5]	17:2[2.5]	19:1[2]	22:1[3]	27:2[2.5]	28:2[2.5]	29:1[3]	30:2[2.5]	32:9[2]	33:8[2]	34:7[2]
	35:1[2]	37:2[2.5]	38:1[2]	55:5[2]	57:5[3]								
R.WS [2]:													
R.WS.1 [2]:	1:10[1.4]	9:2[2]	23:4[1.5]	25:1[2]	36:3[1.67]								
R.WS.2 [1]:	4:2[1.5]	9:1[2]	25:3[1.67]	36:3[1.33]									
R.WS.3 [2]:	1:1[2]	9:9[1.89]	14:1[2]	23:7[1.86]	25:1[1]	33:1[2]	36:8[1.5]						
W [3]:													

Table 6.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 6 Language Arts

W.PR [3]:	22:1 [3]	51:1 [3]						
W.PR.1 [3]:	9:1[2]	22:3 [3]	34:2 [1.5]	51:4 [3]	57:2 [3]			
W.PR.2 [2]:	22:3 [3]	51:5 [3]	56:5 [1.8]	57:3 [3]				
W.PR.3 [3]:	22:6 [3]	28:1 [2]	29:1 [2]	30:1 [2]	51:7 [3]	52:1 [2]	54:1 [2]	57:4 [3]
W.PR.4 [3]:	34:1 [2]	52:1 [2]	57:1 [3]					
W.PR.5 [2]:	22:1 [3]	51:2 [3]	52:2 [1.5]	53:1 [2]	54:6 [2]	55:1 [3]	56:1 [1]	
W.GN [4]:								
W.GN.1 [4]:	22:1 [3]	51:5 [3.2]	53:1 [1]					
W.GN.2 [4]:	22:5 [3.2]	51:1 [3]	57:2 [3]					
W.HW [1]:								
W.HW.1 [1]:								
W.PS [3]:								
W.PS.1 [3]:	33:1 [3]	51:1 [3]	55:1 [2]	57:1 [3]				
W.GR [2]:								
W.G	8:1[	23:1	52:7	53:1	54:1			

Table 6.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 6 Language Arts

R.1 [2]:	2]	[2]	[1.71]	0[1.5]	[2]
W.SP [1]:					
W.SP.1 [1]:	1:1[1]				

Table 7.1
Categorical Concurrence Between Standards and Assessment as Rated by Nine Reviewers
Michigan Grade 7 Language Arts
Number of Assessment Items - 45

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	16.11	1 2 3	1 10 5	6 62 31	44.11	5.40	YES
W - Writing	6	11.44	1 2 3 4	3 2 5 1	27 18 45 9	9.78	1.40	YES
Total	11	27.56	1 2 3 4	4 12 10 1	14 44 37 3	53.89	4.98	

Table 7.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Nine Reviewers
Michigan Grade 7 Language Arts
Number of Assessment Items - 45

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	16.11	44.11	5.40	42	42	51	42	7	22	YES
W - Writing	6	11.44	9.78	1.40	40	46	46	47	14	35	YES
Total	11	27.56	53.89	4.98	41	44	49	44	9	27	

Table 7.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Nine Reviewers
Michigan Grade 7 Language Arts
Number of Assessment Items - 45

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	16.11	44.11	5.40	10.22	1.55	64	10	YES	82	3	0.61	0.06	WEAK
W - Writing	6	11.44	9.78	1.40	5.56	0.50	49	5	WEAK	18	3	0.82	0.05	YES
Total	11	27.56	53.89	4.98	7.89	2.60	56	11		50	32	0.71	0.11	

Table 7.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Nine Reviewers
Michigan Grade 7 Language Arts
Number of Assessment Items - 45

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES

Table 7.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 7 Language Arts

Item Number	Comments by Reviewer
4	Distractors are confusing making it difficult to determine correct choice
11	Distractors cause confusion in choosing correct answer. 2 equally possible correct answers are given
11	Difficult to choose MOST important/ poor choice of distractors
14	Again, distractors are confusing and the 2 equally possible answers are not clearly written/stated -- none fits very well
14	None of the choices is entirely appropriate as a correct answer
15	Again, distractors can be narrowed down to two equally correct possible answers: A because of alignment with question 1 and C because she displayed the charity and generosity within the text
24	Difficult because of 'defiance' and 'denial' Also "dealing with the PUBLIC"

Table 7.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 7 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9
1	2	2	2	2	1	1	2	2	2
2	2	2	2	3	2	2	2	2	3
3	3	2	2	2	2	2	3	2	2
4	3	2	2	1	2	1	2	2	2
5	2	2	2	2	2	2	3	2	3
6	2	2	2	3	1	1	3	2	3
7	3	2	2	3	1	1	3	2	3
8	2	2	2	3	1	1	3	2	2
9	2	2	2	3	1	1	3	2	3
10	1	1	2	2	2	1	2	1	1
11	3	2	2	3	3	1	3	2	3
12	2	2	2	2	1	2	2	2	3
13	2	2	2	3	2	2	3	2	3
14	3	3	2	3	1	2	3	2	3
15	2	3	2	2	2	2	3	2	3
16	2	2	2	3	2	2	3	2	3
17	3	2	2	3	1	2	3	2	3
18	3	3	2	2	1	2	3	2	3
19	2	2	2	3	1	2	3	2	3
20	2	2	2	3	2	2	2	2	2
21	2	2	2	3	1	2	3	2	3
22	3	3	3	3	3	3	3	3	3
23	3	3	2	2	2	2	3	2	2
24	3	2	2	1	1	1	3	2	3
25	1	2	2	1	1	1	2	2	2
26	3	3	2	2	1	2	2	2	3
27	2	3	2	3	1	2	3	3	3
28	1	2	2	1	1	2	3	2	3
29	2	3	2	3	2	2	3	2	3
30	2	1	2	1	2	1	2	2	2
31	2	1	2	2	1	1	2	2	1
32	2	3	2	3	2	2	3	2	2
33	2	2	2	2	2	1	1	2	2
34	2	2	2	2	2	2	2	2	2
35	1	1	2	2	1	1	2	2	3
36	2	1	2	3	1	1	2	2	3
37	2	2	2	2	2	1	3	2	3
38	2	2	2	3	1	2	2	2	3
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									

Table 7.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 7 Language Arts

49									
50									
51	3	3	3	3	3	3	3	3	3
52	1	1	2	1	1	1	2	2	1
53	2	2	2	3	2	1	3	2	3
54	1	1	1	1	1	1	1	1	1
55	1	1	2	1	1	1	1	1	1
56	2	2	2	1	2	2	2	2	2
57	3	3	3	3	3	2	3	3	3

Intraclass Correlation: 0.861
Pairwise Comparison: 0.508

Table 7.7
Notes by Reviewer
Michigan Grade 7 Language Arts

Item Number	Comments by Reviewer
11	Easily can eliminate down to 2 choices, but a bit challenging to arrive at correct answer.
15	Once again, you can easily eliminate it down to 2, but I can easily see "c" being a popular choice, just as easily as "a".
52	Personal narrative is not mentioned in the specific list of "informational genre" but it has been listed in earlier grade levels. Also, under the narrative category, the examples relate more to the traditional definition of "literature"
53	Can also be considered a reading comprehension, main idea question which would fall under RCM.1

Table 7.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 7 Language Arts

Item	DOK0	PObj0	S1Obj0	S2Obj0	DOK1	PObj1	S1Obj1	S2Obj1	DOK2	PObj2	S1Obj2	S2Obj2	DOK3	PObj3	S1Obj3	S2Obj3	DOK4	PObj4	S1Obj4	S2Obj4
1	2	R.CM.1			2	R.CM.1			2	R.NT.3			2	R.CM.1			1	R.CM.1		
2	2	R.CM.1			2	R.CM.1			2	R.NT.1			3	R.IT.1	R.WS.4		2	R.WS.4		
3	3	R.NT.4			2	R.CM.1	R.WS.3		2	R.NT.2			2	R.CM.2			2	R.CM.1		
4	3	R.CM.1			2	R.CM.1			2	R.CM.1			1	R.CM.1			2	R.CM.2		
5	2	R.CM.1			2	R.CM.1			2	R.CM.3			2	R.CM.1			2	R.CM.1		
6	2	R.CM.3			2	R.CM.1			2	R.CM.3			3	R.CS.1			1	R.CM.1		
7	3	R.CM.1			2	R.CM.1			2	R.CM.1			3	R.CM.1			1	R.CM.1		
8	2	R.CM.1			2	R.CM.1	R.WS.1		2	R.CM.3			3	R.CM.1			1	R.NT.3		
9	2	R.CM.1			2	R.CM.1			2	R.CM.3			3	R.CM.3	R.CS.1	R.NT.2	1	R.CM.2		
10	1	R.NT.2			1	R.NT.2			2	R.NT.2			2	R.NT.2			2	R.NT.2		
11	3	R.NT.4			2	R.NT.3	R.NT.4		2	R.NT.3			3	R.NT.4			3	R.NT.3		
12	2	R.NT.4			2	R.NT.3			2	R.NT.3			2	R.NT.4	R.NT.3		1	R.NT.3		
13	2	R.CM.1			2	R.CM.1			2	R.CM.3			3	R.NT.3	R.CM.1		2	R.CM.1		
14	3	R.CM.1			3	R.CM.1			2	R.CM.3			3	R.CM.1	R.NT.3	R.NT.1	1	R.NT.3		
15	2	R.CM.1			3	R.CM.1			2	R.NT.3			2	R.CM.1	R.CM.3		2	R.CM.1		
16	2	R.CM.1			2	R.CM.1			2	R.NT.3			3	R.CM.1			2	R.CM.1		
17	3	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3			1	R.CM.3		
18	3	R.CM.3			3	R.CM.3			2	R.NT.3			2	R.CM.3			1	R.CM.3		
19	2	R.CM.1			2	R.CM.3			2	R.NT.3			3	R.CM.3			1	R.CM.3		
20	2	R.NT.4			2	R.CM.3			2	R.NT.3			3	R.CM.3	R.NT.4		2	R.CM.3		
21	2	R.CM.3			2	R.CM.3			2	R.CM.3			3	R.CM.3			1	R.CM.3		
22	3	W.PR.4	W.PR.2		3	W.PR.4	W.PR.3	W.PR.2	3	W.GN.2	W.PR.4	W.PR.5	3	W.PR.1	W.PR.4	W.GN.2	3	W.PR	W.PR.1	W.PS.1
23	3	R.CM.1			3	R.CM.1			2	R.CM.1			2	R.WS.4			2	R.NT.3		
24	3	R.CM.1			2	R.CM.1			2	R.CM.1			1	R.CM.2			1	R.CM.1		
25	1	R.CM.2			2	R.CM.1			2	R.CM.2			1	R.CM.2			1	R.CM.2		
26	3	R.CM.1			3	R.CM.1			2	R.CM.1			2	R.CM.2	R.CM.1		1	R.NT.3		
27	2	R.CM.1			3	R.CM.3			2	R.CM.3			3	R.CM.1	R.IT.3		1	R.NT.3		
28	1	R.CM.1			2	R.CM.1			2	R.CM.1			1	R.NT.3	R.WS.4		1	R.CM.1		
29	2	R.CM.1			3	R.CM.3			2	R.CM.1			3	R.CM.1	R.IT.3		2	R.CM.1		
30	2	R.IT.1			1	R.NT.2			2	R.IT.1			1	R.IT.1			2	R.IT.1		
31	2	R.WS.1			1	R.WS.2			2	R.WS.2			2	R.WS.1			1	R.WS.1		
32	2	R.IT.3			3	R.IT.3			2	R.NT.3			3	R.CS.1			2	R.CS.1		
33	2	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2		
34	2	R.CM.1			2	R.CM.1			2	R.NT.3			2	R.CM.1			2	R.NT.3		
35	1	R.CM.2			1	R.CM.2			2	R.NT.3			2	R.CM.1			1	R.CM.2		
36	2	R.CM.2			1	R.CM.2			2	R.CM.2			3	R.NT.3			1	R.CM.2		
37	2	R.CM.1			2	R.CM.1			2	R.CM.1			2	R.CM.1	R.CM.2		2	R.NT.3		
38	2	R.IT.3			2	R.IT.3			2	R.NT.3			3	R.CS.1			1	R.CS.1		
39																				
40																				
41																				
42																				
43																				

Table 7.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 7 Language Arts

44																				
45																				
46																				
47																				
48																				
49																				
50																				
51	3	W.PR.4	W.PR.5	W.PR.3	3	W.PR.4	W.PR.2	R.CS.1	3	W.GN.2	W.PR.4	W.PR.5	3	W.GN.2	W.PR.4	W.PR.1	3	W.PR	W.PR.1	W.PS.1
52	1	R.NT.2			1	R.IT.1			2	R.NT.2			1	R.NT.2			1	R.NT.2		
53	2	R.CM.1			2	W.PR.1			2	R.CM.1			3	R.NT.3	R.NT.4		2	R.CM.1		
54	1	W.GR.1			1	W.GR.1	W.SP		1	W.SP.1			1	R.WS.1	R.WS.2		1	W.GR.1		
55	1	W.GR.1			1	W.GR.1			2	W.GR.1			1	W.GR.1			1	W.GR.1		
56	2	W.PR.2	R.CM.1		2	W.PR.2			2	W.PR.2			1	W.PR.2			2	W.PR.2		
57	3	W.PR.4	W.PR.2		3	W.PR.4	W.PR.2	R.CS.1	3	R.CS.1			3	R.CS.1	W.GN.2		3	W.PR	W.PR.1	W.PS.1

Item	DOK5	PObj5	S1Obj5	S2Obj5	DOK6	PObj6	S1Obj6	S2Obj6	DOK7	PObj7	S1Obj7	S2Obj7	DOK8	PObj8	S1Obj8	S2Obj8
1	1	R.CM.2			2	R.CM.2			2	R.WS.2			2	R.CM.2		
2	2	R.NT.1			2	R.WS.3	R.CM.1		2	R.CM.1			3	R.CM.1		
3	2	R.WS.4			3	R.WS.3	R.CM.1		2	R.WS.4			2	R.WS.4		
4	1	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.NT.1		
5	2	R.NT.3			3	R.CM.3			2	R.CM.1			3	R.CM.3		
6	1	R.CM.2			3	R.CM.1			2	R.CM.3			3	R.CM.3		
7	1	R.CM.2			3	R.CM.1			2	R.CM.3			3	R.CM.1		
8	1	R.WS.2			3	R.CM.3	R.WS.3		2	R.CM.3			2	R.CM.2		
9	1	R.CM.2			3	R.CM.1			2	R.CM.2			3	R.NT.3		
10	1	R.NT.2			2	R.NT.2			1	R.NT.3			1	R.NT.2		
11	1	R.NT.3			3	R.NT.3			2	R.NT.3			3	R.NT.4		
12	2	R.NT.4			2	R.NT.3			2	R.NT.3			3	R.NT.3		
13	2	R.CM.1			3	R.CM.1			2	R.CM.1			3	R.CM.3		
14	2	R.CM.1			3	R.CM.3			2	R.CM.3	R.CM.1		3	R.CM.3	R.NT.3	
15	2	R.NT.3			3	W.PR.3			2	R.NT.3			3	R.NT.3		
16	2	R.CM.1			3	R.CM.3			2	R.CM.1	R.CM.3		3	R.CM.3		
17	2	R.CM.2			3	R.CM.2			2	R.CM.3			3	R.CM.2		
18	2	R.NT.3			3	R.CM.1			2	R.CM.3			3	R.CM.1		
19	2	R.CM.2			3	R.NT.3			2	R.CM.2			3	R.CM.3		
20	2	R.NT.4			2	R.NT			2	R.NT.3	R.IT.1		2	R.NT.4		
21	2	R.CM.1			3	R.NT.3			2	R.NT.3			3	R.CM.2	R.CM.3	
22	3	R.CM.3	W.PR.4	W.PR.2	3	W.GN	R.CM.1	R.CM.3	3	R.CM.3	W.PR.2		3	W.PR.4		
23	2	R.CM.1			3	R.CM.1			2	R.CM.1			2	R.CM.2	R.NT.3	
24	1	R.CM.2			3	R.WS.3	R.CM.1		2	R.NT.3			3	R.NT.3		
25	1	R.CM.2			2	R.CM.2			2	R.CM.2			2	R.CM.2		
26	2	R.CM.1			2	R.CM.2			2	R.CM.1			3	R.CM.1		
27	2	R.CM.3			3	R.CM.3			3	R.CM.1			3	R.CM.3		

Table 7.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 7 Language Arts

28	2	R.CM.1			3	R.CM.1			2	R.NT.3			3	R.NT.3		
29	2	R.NT.3			3	R.CM.3			2	R.CM.1	R.CM.2		3	R.CM.3		
30	1	R.IT.2			2	R.NT.2	R.IT.1		2	R.IT.1	R.IT.2		2	R.NT.2		
31	1	W.SP.1			2	R.WS.2			2	R.WS.2			1	R.WS.2		
32	2	R.CS.1			3	R.NT.2			2	W.PR.1			2	R.IT.3		
33	1	R.CM.2			1	R.WS.3			2	R.CM.2			2	R.CM.2		
34	2	R.NT.3			2	R.WS.3			2	R.CM.1			2	R.NT.3		
35	1	R.NT.3			2	R.WS.3			2	R.NT.3			3	R.NT.3		
36	1	R.CM.2			2	R.CM.2			2	R.CM.2			3	R.CM.2		
37	1	R.CM.2			3	R.CM.1			2	R.CM.2			3	R.CM.3		
38	2	R.NT.4			2	R.NT.3			2	R.IT.3			3	R.NT.4		
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																
51	3	R.CM.1	W.PR.4	W.GN.2	3	W.GN.1	R.CM.1		3	W.PR.2	W.GN.1	W.GN.2	3	W.PR.4	W.PR.1	W.PR.5
52	1	R.NT.2			2	R.NT.2	R.IT.1		2	R.NT.2			1	R.NT.2		
53	1	R.NT.3			3	R.CM.1			2	R.CM.2			3	R.CM.3	R.NT.3	
54	1	W.SP.1			1	W.SP.1			1	W.GR.1			1	W.GR.1		
55	1	W.GR.1			1	W.SP.1	W.GR		1	W.GR.1			1	W.GR.1		
56	2	W.PR.2			2	R.CM.1	W.PR.2		2	W.PR.2			2	W.PR.2		
57	2	R.CS.1	W.PR.4	W.GN.2	3	W.GN	R.CM.1		3	R.CS.1	W.PR.2	W.PR.3	3	W.GN.2		

Pairwise Comparison: 0.388
Standard Pairwise Comparison: 0.9519

Table 7.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 7 Language Arts

Low		Medium		High
0		8.508772		26

1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.NT.3	R.WS.2	
2	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.IT.1	R.NT.1	R.NT.1	R.WS.3	R.WS.4
	R.WS.4									
3	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.NT.2	R.NT.4	R.WS.3	R.WS.3	R.WS.4	R.WS.4
	R.WS.4									
4	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.NT.1	
5	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.NT.3	
6	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CS.1	
7	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	
8	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.NT.3	R.WS.1	R.WS.2
	R.WS.3									
9	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.CM.3	R.CS.1	R.NT.2
	R.NT.3									
10	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.3	
11	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.NT.4
12	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4
13	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.NT.3
14	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.NT.1

Table 7.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 7 Language Arts

	R.NT.3	R.NT.3	R.NT.3							
15	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.NT.3	R.NT.3	R.NT.3	R.NT.3	W.PR.3
16	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.NT.3
17	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	
18	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.NT.3	R.NT.3	
19	R.CM.1	R.CM.2	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.NT.3	R.NT.3	
20	R.CM.3	R.CM.3	R.CM.3	R.IT.1	R.NT	R.NT.3	R.NT.3	R.NT.4	R.NT.4	R.NT.4
	R.NT.4									
21	R.CM.1	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.NT.3	R.NT.3
22	R.CM.1	R.CM.3	R.CM.3	R.CM.3	W.PR	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.2
	W.PR.2	W.PR.3	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.5	
	W.GN	W.GN.2	W.GN.2	W.PS.1						
23	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.NT.3	R.NT.3	R.WS.4
24	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.NT.3	R.NT.3	R.WS.3
25	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	
26	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.NT.3
27	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.CM.3	R.IT.3	R.NT.3
28	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.NT.3	R.NT.3	R.NT.3	R.WS.4

Table 7.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 7 Language Arts

29	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.CM.3	R.CM.3	R.IT.3
	R.NT.3									
30	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.1	R.IT.2	R.IT.2	R.NT.2	R.NT.2
	R.NT.2									
31	R.WS.1	R.WS.1	R.WS.1	R.WS.2	R.WS.2	R.WS.2	R.WS.2	R.WS.2	W.SP.1	
32	R.CS.1	R.CS.1	R.CS.1	R.IT.3	R.IT.3	R.IT.3	R.NT.2	R.NT.3	W.PR.1	
33	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.WS.3	
34	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.WS.3	
35	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.NT.3	R.NT.3	R.NT.3	R.NT.3	R.WS.3	
36	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.NT.3	
37	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.NT.3
38	R.CS.1	R.CS.1	R.IT.3	R.IT.3	R.IT.3	R.NT.3	R.NT.3	R.NT.4	R.NT.4	
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	R.CM.1	R.CM.1	R.CS.1	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2	W.PR.3
	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.4	W.PR.5	W.PR.5	W.PR.5	
	W.G	W.G	W.G	W.G	W.G	W.G	W.P			

Table 7.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 7 Language Arts

	N.1	N.1	N.2	N.2	N.2	N.2	S.1			
52	R.IT.1	R.IT.1	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2	R.NT.2
53	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.3	R.NT.3	R.NT.3	R.NT.3	R.NT.4
	W.PR.1									
54	R.WS.1	R.WS.2	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.SP	W.SP.1	W.SP.1
	W.SP.1									
55	W.GR	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.SP.1
56	R.CM.1	R.CM.1	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2	W.PR.2
	W.PR.2									
57	R.CM.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	R.CS.1	W.PR	W.PR.1	W.PR.2	W.PR.2
	W.PR.2	W.PR.3	W.PR.4	W.PR.4	W.PR.4	W.GN	W.GN.2	W.GN.2	W.GN.2	
	W.PS.1									

Table 7.10
Items Coded by Reviewers to Each Objective
Michigan Grade 7 Language Arts

Low		Medium		High
0		11.82927		116

R																				
R.CM																				
R.CM.1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	4	5	5	5	5
	5	6	6	6	7	7	7	7	7	7	7	8	8	8	9	9	9	13	13	
	13	13	13	13	13	14	14	14	14	14	15	15	15	15	16	16	16	16	16	
	16	18	18	19	21	22	23	23	23	23	23	23	24	24	24	24	24	25	26	
	26	26	26	26	26	26	27	27	27	28	28	28	28	28	28	29	29	29	29	
	29	34	34	34	34	35	37	37	37	37	37	51	51	53	53	53	53	56	56	
	57																			
R.CM.2	1	1	1	3	4	4	4	4	6	7	8	9	9	9	17	17	17	19	19	21
	23	24	24	25	25	25	25	25	25	25	25	26	26	29	33	33	33	33	33	
	33	33	33	35	35	35	36	36	36	36	36	36	36	36	37	37	37	53		
R.CM.3	5	5	5	6	6	6	6	7	8	8	8	9	9	13	13	14	14	14	14	15
	16	16	16	17	17	17	17	17	17	18	18	18	18	18	19	19	19	19	20	
	20	20	21	21	21	21	21	21	22	22	22	27	27	27	27	27	29	29	29	
	37	53																		
R.CM.4																				
R.CS																				
R.CS.1	6	9	32	32	32	38	38	51	57	57	57	57	57							
R.IT																				
R.IT.1	2	20	30	30	30	30	30	30	52	52										
R.IT.2	30	30																		
R.IT.3	27	29	32	32	32	38	38	38												
R.NT	20																			
R.NT.1	2	2	4	14																
R.NT.2	3	9	10	10	10	10	10	10	10	10	30	30	30	32	52	52	52	52	52	52

Table 7.10
Items Coded by Reviewers to Each Objective
Michigan Grade 7 Language Arts

	52	52																	
R.NT.3	1	5	8	9	10	11	11	11	11	11	11	12	12	12	12	12	12	12	13	14
	14	14	15	15	15	15	16	18	18	19	19	20	20	21	21	23	23	24	24	
	26	27	28	28	28	29	32	34	34	34	34	35	35	35	35	36	37	38	38	
	53	53	53																	
R.NT.4	3	11	11	11	11	12	12	12	20	20	20	20	38	38	53					
R.WS																				
R.WS.1	8	31	31	31	54															
R.WS.2	1	8	31	31	31	31	31	54												
R.WS.3	2	3	3	8	24	33	34	35												
R.WS.4	2	2	3	3	3	23	28													
W																				
W.PR	22	51	57																	
W.PR.1	22	22	32	51	51	51	53	57												
W.PR.2	22	22	22	22	51	51	56	56	56	56	56	56	56	56	56	57	57	57		
W.PR.3	15	22	51	57																
W.PR.4	22	22	22	22	22	22	51	51	51	51	51	51	57	57	57					
W.PR.5	22	51	51	51																
W.GN	22	57																		
W.GN.1	51	51																		
W.GN.2	22	22	51	51	51	51	57	57	57											
W.HW																				
W.HW.1																				
W.PS																				

Table 7.10
Items Coded by Reviewers to Each Objective
Michigan Grade 7 Language Arts

W.PS.1	22	51	57										
W.GR	55												
W.GR.1	54	54	54	54	54	55	55	55	55	55	55	55	55
W.SP	54												
W.SP.1	31	54	54	54	55								

Table 7.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 7 Language Arts

Low		Medium		High
1		4		9

R													
R.CM													
R.CM.1	1:4	2:5	3:3	4:4	5:5	6:3	7:7	8:3	9:3	13:7	14:5	15:4	16:6
	18:2	19:1	21:1	22:1	23:6	24:5	25:1	26:7	27:3	28:6	29:5	34:4	35:1
	37:5	51:2	53:4	56:2	57:1								
R.CM.2	1:3	3:1	4:4	6:1	7:1	8:1	9:3	17:3	19:2	21:1	23:1	24:2	25:8
	26:2	29:1	33:8	35:3	36:8	37:3	53:1						
R.CM.3	5:3	6:4	7:1	8:3	9:2	13:2	14:4	15:1	16:3	17:6	18:5	19:4	20:3
	21:6	22:3	27:5	29:3	37:1	53:1							
R.CM.4													
R.CS													
R.CS.1	6:1	9:1	32:3	38:2	51:1	57:5							
R.IT													
R.IT.1	2:1	20:1	30:6	52:2									
R.IT.2	30:2												
R.IT.3	27:1	29:1	32:3	38:3									
R.NT	20:1												
R.NT.1	2:2	4:1	14:1										
R.NT.2	3:1	9:1	10:8	30:3	32:1	52:8							
R.NT.3	1:1	5:1	8:1	9:1	10:1	11:6	12:7	13:1	14:3	15:4	16:1	18:2	19:2
	20:2	21:2	23:2	24:2	26:1	27:1	28:3	29:1	32:1	34:4	35:4	36:1	37:1
	38:2	53:3											
R.NT.4	3:1	11:4	12:3	20:4	38:2	53:1							
R.W													

Table 7.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 7 Language Arts

S							
R.WS.1	8:1	31:3	54:1				
R.WS.2	1:1	8:1	31:5	54:1			
R.WS.3	2:1	3:2	8:1	24:1	33:1	34:1	35:1
R.WS.4	2:2	3:3	23:1	28:1			
W							
W.PR	22:1	51:1	57:1				
W.PR.1	22:2	32:1	51:3	53:1	57:1		
W.PR.2	22:4	51:2	56:9	57:3			
W.PR.3	15:1	22:1	51:1	57:1			
W.PR.4	22:6	51:6	57:3				
W.PR.5	22:1	51:3					
W.GN	22:1	57:1					
W.GN.1	51:2						
W.GN.2	22:2	51:4	57:3				
W.HW							
W.HW.1							
W.PS							
W.PS.1	22:1	51:1	57:1				
W.GR	55:1						
W.GR.1	54:5	55:8					
W.SP	54:1						
W.S	31:1	54:3	55:1				

Table 7.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 7 Language Arts

P.1			

Table 7.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 7 Language Arts

Low DOK		Matched DOK		High DOK
1		4		9

R [2]:													
R.CM [3]:													
R.CM.1 [3]:	1:4[1.75]	2:5[2.2]	3:3[2.33]	4:4[2]	5:5[2]	6:3[2]	7:7[2.43]	8:3[2.33]	9:3[2.33]	13:7[2.29]	14:5[2.6]	15:4[2.25]	16:6[2.17]
	18:2[3]	19:1[2]	21:1[2]	22:1[3]	23:6[2.5]	24:5[2.2]	25:1[2]	26:7[2.43]	27:3[2.67]	28:6[1.83]	29:5[2.2]	34:4[2]	35:1[2]
	37:5[2.2]	51:2[3]	53:4[2.25]	56:2[2]	57:1[3]								
R.CM.2 [2]:	1:3[1.67]	3:1[2]	4:4[1.75]	6:1[1]	7:1[1]	8:1[2]	9:3[1.33]	17:3[2.67]	19:2[2]	21:1[3]	23:1[2]	24:2[1]	25:8[1.5]
	26:2[2]	29:1[2]	33:8[1.88]	35:3[1]	36:8[1.75]	37:3[1.67]	53:1[2]						
R.CM.3 [3]:	5:3[2.67]	6:4[2.25]	7:1[2]	8:3[2.33]	9:2[2.5]	13:2[2.5]	14:4[2.5]	15:1[2]	16:3[2.67]	17:6[2.17]	18:5[2.2]	19:4[2.25]	20:3[2.33]
	21:6[2.17]	22:3[3]	27:5[2.6]	29:3[3]	37:1[3]	53:1[3]							
R.CM.4 [2]:													
R.CS [3]:													
R.CS.1 [3]:	6:1[3]	9:1[3]	32:3[2.33]	38:2[2]	51:1[3]	57:5[2.8]							
R.IT [2]:													
R.IT	2:1[	20:1	30:6	52:2									

Table 7.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 7 Language Arts

.1 [2]:	3]	[2]	[1.83]	[1.5]									
R.IT.2 [2]:	30:2 [1.5]												
R.IT.3 [2]:	27:1 [3]	29:1 [3]	32:3 [2.33]	38:3 [2]									
R.NT [3]:	20:1 [2]												
R.NT.1 [2]:	2:2[2]	4:1[2]	14:1 [3]										
R.NT.2 [2]:	3:1[2]	9:1[3]	10:8 [1.5]	30:3 [1.67]	32:1 [3]	52:8 [1.38]							
R.NT.3 [3]:	1:1[2]	5:1[2]	8:1[1]	9:1[3]	10:1 [1]	11:6 [2.17]	12:7 [2]	13:1 [3]	14:3 [2.33]	15:4 [2.25]	16:1 [2]	18:2 [2]	19:2 [2.5]
	20:2 [2]	21:2 [2.5]	23:2 [2]	24:2 [2.5]	26:1 [1]	27:1 [1]	28:3 [2]	29:1 [2]	32:1 [2]	34:4 [2]	35:4 [2]	36:1 [3]	37:1 [2]
	38:2 [2]	53:3 [2.33]											
R.NT.4 [3]:	3:1[3]	11:4 [2.75]	12:3 [2]	20:4 [2.25]	38:2 [2.5]	53:1 [3]							
R.WS [2]:													
R.WS.1 [2]:	8:1[2]	31:3 [1.67]	54:1 [1]										
R.WS.2 [2]:	1:1[2]	8:1[1]	31:5 [1.6]	54:1 [1]									
R.WS.3 [1]:	2:1[2]	3:2[2.5]	8:1[3]	24:1 [3]	33:1 [1]	34:1 [2]	35:1 [2]						
R.WS.4 [2]:	2:2[2.5]	3:3[2]	23:1 [2]	28:1 [1]									

Table 7.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 7 Language Arts

W [3]:					
W.PR [3]:	22:1 [3]	51:1 [3]	57:1 [3]		
W.PR.1 [3]:	22:2 [3]	32:1 [2]	51:3 [3]	53:1 [2]	57:1 [3]
W.PR.2 [3]:	22:4 [3]	51:2 [3]	56:9 [1.89]	57:3 [3]	
W.PR.3 [2]:	15:1 [3]	22:1 [3]	51:1 [3]	57:1 [3]	
W.PR.4 [3]:	22:6 [3]	51:6 [3]	57:3 [2.67]		
W.PR.5 [1]:	22:1 [3]	51:3 [3]			
W.GN [4]:	22:1 [3]	57:1 [3]			
W.GN.1 [4]:	51:2 [3]				
W.GN.2 [3]:	22:2 [3]	51:4 [3]	57:3 [2.67]		
W.HW [1]:					
W.HW.1 [1]:					
W.PS [3]:					
W.PS.1 [3]:	22:1 [3]	51:1 [3]	57:1 [3]		
W.GR	55:1 [1]				

Table 7.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 7 Language Arts

[2]:			
W.GR.1 [2]:	54:5 [1]	55:8 [1.12]	
W.SP [1]:	54:1 [1]		
W.SP.1 [1]:	31:1 [1]	54:3 [1]	55:1 [1]

Table 8.1
Categorical Concurrence Between Standards and Assessment as Rated by Ten Reviewers
Michigan Grade 8 Language Arts
Number of Assessment Items - 45

Standards			Level by Objective			Hits		Cat. Concurr.
Title	Goals #	Objs #	Level	# of objs by Level	% w/in std by Level	Mean	S.D.	
R - Reading	5	16	1 2 3	1 10 5	6 62 31	42.6	5.30	YES
W - Writing	6	11.6	1 2 3 4	3 1 5 2	27 9 45 18	7.9	2.74	YES
Total	11	27.6	1 2 3 4	4 11 10 2	14 40 37 7	50.5	5.43	

Table 8.2
Depth-of-Knowledge Consistency Between Standards and Assessment as Rated by Ten Reviewers
Michigan Grade 8 Language Arts
Number of Assessment Items - 45

Standards			Hits		Level of Item w.r.t. Standard						DOK Consistency
					% Under		% At		% Above		
Title	Goals #	Objs #	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
R - Reading	5	16	42.6	5.30	39	41	53	40	8	22	YES
W - Writing	6	11.6	7.9	2.74	42	47	46	48	12	32	YES
Total	11	27.6	50.5	5.43	40	43	51	43	9	26	

Table 8.3

Range-of-Knowledge Correspondence and Balance of Representation Between Standards and Assessment as Rated by Ten Reviewers
Michigan Grade 8 Language Arts
Number of Assessment Items - 45

Standards			Hits		Range of Objectives				Rng. of Know.	Balance Index				Bal. of Represent.
					# Objs Hit		% of Total			% Hits in Std/Ttl Hits		Index		
Title	Goals #	Objs #	Mean	S.D.	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
R - Reading	5	16	42.6	5.30	10	1.34	62	8	YES	84	5	0.64	0.05	WEAK
W - Writing	6	11.6	7.9	2.74	5.4	1.11	46	9	WEAK	16	5	0.85	0.07	YES
Total	11	27.6	50.5	5.43	7.7	2.61	54	12		50	35	0.74	0.12	

Table 8.4
Summary of Attainment of Acceptable Alignment Level on Four Content Focus Criteria as Rated by Ten Reviewers
Michigan Grade 8 Language Arts
Number of Assessment Items - 45

Standards	Alignment Criteria			
	Categorical Concurrence	Depth-of-Knowledge Consistency	Range of Knowledge	Balance of Representation
R - Reading	YES	YES	YES	WEAK
W - Writing	YES	YES	WEAK	YES

Table 8.5
Source-of-Challenge Issues by Reviewer
Michigan Grade 8 Language Arts

Item Number	Comments by Reviewer
27	There are probably two "correct" answers, "B" and "D", though I think "D" is the intended answer.
27	Two Choices could be correct.
51	This question put the lower socioeconomic student at a disadvantage. Having balance or recognizing balance is a middle class idea. Many students have difficulty recognizing balance because it is not modeled.

Table 8.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 8 Language Arts

Item	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Rater 7	Rater 8	Rater 9	Rater 10
1	2	3	2	2	1	3	2	2	2	1
2	2	2	2	2	1	3	2	2	2	2
3	2	3	2	3	1	3	2	2	2	1
4	2	3	2	2	1	3	3	2	2	3
5	2	3	2	2	2	3	2	2	2	3
6	1	2	1	1	1	1	2	2	2	3
7	2	3	2	3	2	3	2	3	2	3
8	2	3	2	3	2	3	3	3	2	3
9	3	3	2	2	2	3	2	2	2	1
10	2	2	2	1	1	3	2	2	2	1
11	1	2	1	1	1	2	1	2	2	3
12	1	2	1	1	1	1	1	2	2	3
13	1	1	1	2	1	2	1	2	2	3
14	2	2	1	2	2	2	2	2	2	3
15	2	1	1	2	1	2	1	2	2	3
16	2	2	1	2	2	2	2	2	2	3
17	2	2	2	2	1	2	2	2	2	2
18	2	2	2	2	2	2	2	3	2	2
19	2	1	1	1	1	1	1	2	2	3
20	2	1	1	1	1	2	2	2	2	2
21	1	2	2	1	1	2	2	3	2	3
22	3	3	3	3	3	3	3	2	3	3
23	3	3	2	2	2	3	2	3	2	2
24	3	2	2	2	2	3	2	3	2	2
25	2	2	2	3	1	2	2	2	2	3
26	2	2	2	1	1	2	1	2	2	2
27	3	2	2	2	2	3	1	3	2	3
28	2	2	2	3	1	3	2	2	2	3
29	2	1	2	1	1	2	2	2	2	3
30	2	2	2	2	2	1	2	2	2	1
31	2	2	2	2	1	3	2	2	2	1
32	2	2	2	3	2	3	2	2	2	1
33	2	2	2	2	2	2	2	3	2	3
34	3	2	2	1	2	2	2	2	2	3
35	2	2	2	2	2	2	2	3	2	2
36	2	2	2	3	1	1	2	3	2	2
37	2	2	2	3	1	1	2	2	2	3
38	2	3	2	3	1	2	2	3	3	3
39										

Table 8.6
Depth-of-Knowledge Levels by Item and Reviewers
Intraclass Correlation
Michigan Grade 8 Language Arts

40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	3	3	3	3	3	4	3	3	3	3
52	1	1	1	1	1	1	1	1	1	2
53	1	1	1	1	1	1	1	2	2	3
54	1	1	1	2	2	2	1	2	2	1
55	3	2	2	1	1	2	2	2	2	2
56	1	2	2	2	2	3	2	2	2	3
57	3	3	2	2	3	3	3	3	3	3

Intraclass Correlation: 0.8353
Pairwise Comparison: 0.5012

Table 8.7
Notes by Reviewer
Michigan Grade 8 Language Arts

Item Number	Comments by Reviewer
23	2 possible answers
27	Difficult item.
51	The topic may be difficult for students to relate to.
57	Why ask the same question as item 56 ?

Table 8.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 8 Language Arts

Item	DO K0	PObj0	S1Obj0	S2Obj0	DO K1	PObj1	S1Obj1	S2Obj1	DO K2	PObj2	S1Obj2	DO K3	PObj3	S1Obj3	S2Obj3	DO K4	PObj4	S1Obj4	S2Obj4
1	2	R.NT.4			3	R.CM.1			2	R.NT.2		2	R.WS.1			1	R.CM.1		
2	2	R.NT.4			2	R.IT.3			2	R.NT.3		2	R.WS.2			1	R.NT.4		
3	2	R.CM.2			3	R.IT.3			2	R.IT.3		3	R.IT.3			1	R.NT.4		
4	2	R.CM.1	R.CM.4		3	R.CM.3			2	R.CM.1		2	R.IT.3			1	R.CM.2		
5	2	R.CM.1			3	R.CM.3			2	R.CM.1		2	R.CM.2			2	R.CM.1		
6	1	R.CM.2			2	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2		
7	2	R.IT.3			3	R.IT.3			2	R.IT.3		3	R.IT.3			2	R.CM.1		
8	2	R.CM.1			3	R.IT.3			2	R.IT.1		3	R.IT.3			2	R.CM.1		
9	3	R.CM.2			3	R.CM.1			2	R.CM.2		2	R.CM.1			2	R.IT.3		
10	2	R.CM.2			2	R.CM.1			2	R.CM.2		1	R.CM.2			1	R.CM.2		
11	1	R.CM.2			2	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2		
12	1	R.CM.2			2	R.CM.2			1	R.CM.2		1	R.CM.2			1	R.CM.2		
13	1	R.WS.4			1	R.IT.3			1	R.CM.2		2	R.WS.4	R.WS.2		1	R.IT.3		
14	2	R.CM.2			2	R.CM.1			1	R.CM.2		2	R.IT.3			2	R.CM.1		
15	2	R.CM.2			1	R.CM.2			1	R.CM.2		2	R.CM.2			1	R.WS.3		
16	2	R.WS.4			2	R.WS.2	R.WS.1		1	R.WS.2		2	R.WS.4	R.WS.2	R.WS.1	2	R.WS.4		
17	2	R.CM.3			2	R.CM.3			2	R.CM.3		2	R.CM.3			1	R.CM.3		
18	2	R.CM.1			2	R.WS.3	R.CM.1		2	R.CM.3		2	R.CM.3	R.CM.1	R.CM.2	2	R.CM.3		
19	2	R.NT.2			1	R.IT.1			1	R.IT.1		1	R.IT.1			1	R.IT.1		
20	2	R.CM.1			1	R.IT.3			1	R.IT.3		1	R.CM.2			1	R.IT.2		
21	1	R.CM.2			2	R.CM.1			2	R.CM.3		1	R.CM.2			1	R.CM.3		
22	3	W.PR.4	W.PR.2		3	W.PR.1	W.PR.2	R.CS.1	3	W.GN.2	W.PR.4	3	W.PR.1	W.GN.1		3	W.PR	W.PR.1	W.PR.4
23	3	R.NT.3			3	R.NT.4			2	R.NT.3		2	R.CM.1			2	R.NT.3		
24	3	R.CM.1			2	R.CM.1			2	R.NT.3		2	R.CM.1	R.NT.4	R.NT.3	2	R.CM.1		
25	2	R.CM.1			2	R.CM.1			2	R.CM.1		3	R.NT.3	R.CM.1		1	R.NT.3		
26	2	R.CM.1			2	R.CM.1			2	R.CM.2		1	R.CM.2			1	R.CM.2		
27	3	R.CM.1			2	R.CM.1			2	R.CM.1		2	R.CM.1			2	R.NT.3		
28	2	R.CM.1			2	R.CM.1			2	R.NT.3		3	R.NT.3	R.NT.2	R.NT.4	1	R.NT.4		
29	2	W.PR.2			1	R.CM.2			2	R.CM.1		1	R.CM.2			1	R.CM.2		
30	2	R.WS.4			2	R.WS.1	R.WS.2		2	R.WS.1		2	R.WS.1	R.WS.2		2	R.WS.1		
31	2	R.CM.1			2	R.CM.1			2	R.NT.3		2	R.CM.1			1	R.CM.1		
32	2	R.CM.1			2	R.CM.1			2	R.CM.3		3	R.IT.1	R.WS.4		2	R.WS.4		
33	2	R.NT.4			2	R.WS.3			2	R.NT.4		2	R.CM.2			2	R.CM.1		
34	3	R.CM.1			2	R.CM.1			2	R.CM.1		1	R.CM.1			2	R.CM.2		
35	2	R.CM.1			2	R.CM.1			2	R.NT.3		2	R.CM.1			2	R.CM.1		
36	2	R.CM.1			2	R.CM.1			2	R.NT.3		3	R.CS.1			1	R.CM.1		
37	2	R.CM.1			2	R.CM.1			2	R.CM.1		3	R.CM.1			1	R.CM.2		

Table 8.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 8 Language Arts

38	2	R.CM.1			3	R.WS.2	R.WS.1		2	R.CM.3		3	R.CM.1			1	R.NT.3		
39																			
40																			
41																			
42																			
43																			
44																			
45																			
46																			
47																			
48																			
49																			
50																			
51	3	W.PR.4	W.PR.5	W.PR.3	3	W.PR.1	W.PR.2	R.CS.1	3	W.GN		3	W.GN.1	W.PR.1	W.PR.3	3	W.PR	W.PR.1	W.PR.4
52	1	W.SP.1			1	W.SP.1			1	W.SP		1	W.SP.1			1	W.GR.1		
53	1	W.GR.1			1	W.GR.1			1	W.GR.1		1	W.GR.1			1	W.GR.1		
54	1	R.NT.4			1	R.IT.3			1	R.WS.2		2	R.IT.1			2	W.ST.1		
55	3	R.NT.4			2	R.IT.3			2	R.NT.2		1	R.IT.1			1	W.PR.1		
56	1	W.PR.4			2	W.PR			2	W.PR.5		2	R.CS.1	R.IT.2		2	W.PR.4		
57	3	W.PR			3	W.PR.1	W.PR.2	W.PR.5	2	W.PR.5		2	R.IT.1	R.CS.1	R.CM.1	3	W.PR	W.ST.1	W.PR.4

Item	DOK5	PObj5	S1Obj5	Item	S2Obj5	DOK6	PObj6	DOK7	PObj7	S1Obj7	S2Obj7	DOK8	PObj8	S1Obj8	S2Obj8	DOK9	PObj9
1	3	R.CM.1		1		2	R.WS.4	2	R.WS.3			2	R.CM.2			1	R.CM.2
2	3	R.CM.3		2		2	R.CM.1	2	R.WS.4			2	R.NT.4			2	R.NT.2
3	3	R.NT.3		3		2	R.IT.3	2	R.IT.3			2	R.NT.4			1	R.CM.2
4	3	R.CM.1		4		3	R.CM.1	2	R.CM.1			2	R.CM.2			3	R.CM.1
5	3	R.CM.1		5		2	R.CM.1	2	R.CM.2			2	R.CM.1			3	R.CM.1
6	1	R.CM.2		6		2	R.CM.1	2	R.CM.1			2	R.CM.2			3	R.CM.1
7	3	R.NT.3		7		2	R.IT.3	3	R.IT.3			2	R.CM.2			3	R.CM.3
8	3	R.NT.3		8		3	R.CM.1	3	R.CM.1	R.NT.3		2	R.CM.1			3	R.CM.1
9	3	R.CM.1		9		2	R.CM.1	2	R.CM.3			2	R.CM.2			1	R.CM.2
10	3	R.CM.2		10		2	R.CM.2	2	R.CM.2			2	R.CM.2			1	R.NT.2
11	2	R.CM.2		11		1	R.CM.2	2	R.CM.2			2	R.CM.2			3	R.CS.1
12	1	R.CM.2		12		1	R.CM.2	2	R.CM.2			2	R.CM.2			3	R.CS.1
13	2	R.WS.1		13		1	R.CM.2	2	R.CM.4			2	R.WS.4			3	R.NT.3
14	2	R.NT.3		14		2	R.CM.1	2	R.CM.2			2	R.CM.2			3	R.NT.3
15	2	R.CM.2		15		1	R.CM.2	2	R.WS.3			2	R.NT.3			3	R.NT.3
16	2	R.WS.1		16		2	R.WS.4	2	R.WS.4			2	R.WS.2			3	R.NT.3

Table 8.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 8 Language Arts

17	2	R.CM.3		17		2	R.CM.1	2	R.CM.1			2	R.CM.1			2	R.CM.2
18	2	R.CM.3	R.WS.3	18		2	R.CM.1	3	R.CM.3			2	R.CM.1			2	R.NT.3
19	1	R.NT.2		19		1	R.NT.2	2	R.IT.1	R.NT.1		2	R.NT.2			3	R.NT.4
20	2	R.CM.1		20		2	R.CM.1	2	R.WS.3	R.CM.1		2	R.CM.3			2	R.NT.4
21	2	R.CM.2		21		2	R.CM.2	3	W.GN.2	R.CM.3		2	R.CM.2			3	R.NT.3
22	3	R.NT.1		22		3	W.PR.2	2	R.CM.2			3	W.PR.2			3	W.GN.2
23	3	R.CM.1		23		2	R.CM.3	3	R.CM.1			2	R.NT.4	R.NT.3		2	R.CM.2
24	3	R.CM.3		24		2	R.CM.1	3	R.CM.1			2	R.CM.1	R.CM.2		2	R.NT.3
25	2	R.CM.1		25		2	R.CM.2	2	R.CM.2			2	R.CM.1			3	R.CM.1
26	2	R.NT.1		26		1	R.CM.2	2	R.CM.1			2	R.CM.2			2	R.CM.2
27	3	R.CM.1		27		1	R.CM.2	3	R.CM.1			2	R.CM.1			3	R.CM.3
28	3	R.CM.1		28		2	R.CM.1	2	R.CM.1			2	R.NT.3			3	R.CM.1
29	2	R.CM.2		29		2	R.CM.1	2	R.CM.1			2	R.CM.3			3	R.CM.1
30	1	R.WS.1		30		2	R.WS.4	2	R.WS.4			2	R.WS.2			1	R.NT.2
31	3	R.CM.1		31		2	R.CM.2	2	R.CM.2			2	R.CM.2			1	R.WS.3
32	3	R.NT.1		32		2	R.CM.3	2	R.WS.3	R.CM.2		2	R.CM.1			1	R.CM.2
33	2	R.WS.2		33		2	R.WS.4	3	R.WS.4			2	R.CM.2			3	R.CM.1
34	2	R.CM.1		34		2	R.CM.1	2	R.CM.1			2	R.CM.2			3	R.NT.3
35	2	R.NT.3		35		2	R.CM.3	3	R.CM.1			2	R.CM.2			2	R.CM.2
36	1	R.CM.2		36		2	R.CM.3	3	R.CM.1			2	R.CM.1			2	R.CM.2
37	1	R.CM.2		37		2	R.CM.1	2	R.CM.2			2	R.CM.3			3	R.CM.1
38	2	R.WS.2		38		2	R.CM.3	3	R.CM.1	R.WS.4		3	R.CM.3			3	R.CS.1
39				39													
40				40													
41				41													
42				42													
43				43													
44				44													
45				45													
46				46													
47				47													
48				48													
49				49													
50				50													
51	4	W.PR.1	W.ST.1	51		3	W.PR	3	W.GN.1	R.CM.1		3	W.GN.1	W.PR.2	W.PR.4	3	W.GN.1
52	1	W.SP.1		52		1	W.SP.1	1	W.SP.1			1	W.SP.1			2	R.NT.2
53	1	W.GR.1		53		1	W.GR.1	2	W.PR.5	W.GR.1		2	R.WS.2			3	R.NT.3
54	2	R.WS.2		54		1	R.WS.2	2	W.PR.4	R.NT.4	R.WS.3	2	W.ST.1			1	R.WS.3
55	2	R.NT.3		55		2	W.ST.1	2	R.IT.3			2	W.ST.1			2	R.WS.2

Table 8.8
DOK Levels and Objectives Coded by Each Reviewer
Michigan Grade 8 Language Arts

56	3	W.GR.1		56		2	W.PR.3	2	W.PR.5			2	W.PR.3			3	W.PR.2
57	3	R.NT.4		57		3	R.CS.1	3	W.GN.2			3	R.CS.1			3	W.GN.2

Pairwise Comparison: 0.2998
Standard Pairwise Comparison: 0.9321

Table 8.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 8 Language Arts

Low		Medium		High
0		8.859649		22

1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.NT.2	R.NT.4	R.WS.1	R.WS.3	R.WS.4
2	R.CM.1	R.CM.3	R.IT.3	R.NT.2	R.NT.3	R.NT.4	R.NT.4	R.NT.4	R.WS.2	R.WS.4
3	R.CM.2	R.CM.2	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.NT.3	R.NT.4	R.NT.4
4	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.3	R.CM.4
	R.IT.3									
5	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.3
6	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2
7	R.CM.1	R.CM.2	R.CM.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.IT.3	R.NT.3
8	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.IT.1	R.IT.3	R.IT.3	R.NT.3
	R.NT.3									
9	R.CM.1	R.CM.1	R.CM.1	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.3	R.IT.3
10	R.CM.1	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.NT.2
11	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CS.1
12	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CM.2	R.CS.1
13	R.C	R.C	R.C	R.IT	R.IT	R.N	R.W	R.W	R.W	R.W

Table 8.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 8 Language Arts

	M.2	M.2	M.4	.3	.3	T.3	S.1	S.2	S.4	S.4
	R.W S.4									
14	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.IT .3	R.N T.3	R.N T.3
15	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.N T.3	R.N T.3	R.W S.3	R.W S.3
16	R.N T.3	R.W S.1	R.W S.1	R.W S.1	R.W S.2	R.W S.2	R.W S.2	R.W S.2	R.W S.4	R.W S.4
	R.W S.4	R.W S.4	R.W S.4							
17	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3	R.C M.3
18	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.C M.3
	R.C M.3	R.N T.3	R.W S.3	R.W S.3						
19	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.IT .1	R.N T.1	R.N T.2	R.N T.2	R.N T.2	R.N T.2
	R.N T.4									
20	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.IT .2	R.IT .3	R.IT .3	R.N T.4
	R.W S.3									
21	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.3	R.C M.3	R.C M.3	R.N T.3
	W.G N.2									
22	R.C M.2	R.C S.1	R.N T.1	W.P R	W.P R.1	W.P R.1	W.P R.1	W.P R.2	W.P R.2	W.P R.2
	W.P R.2	W.P R.4	W.P R.4	W.P R.4	W.G N.1	W.G N.2	W.G N.2			
23	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.N T.3	R.N T.3	R.N T.3	R.N T.3	R.N T.4
	R.N T.4									
24	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.N T.3
	R.N	R.N	R.N							

Table 8.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 8 Language Arts

	T.3	T.3	T.4							
25	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.N T.3
	R.N T.3									
26	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.N T.1
27	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.3	R.N T.3
28	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.N T.2	R.N T.3	R.N T.3	R.N T.3
	R.N T.4	R.N T.4								
29	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.2	R.C M.3	W.P R.2
30	R.N T.2	R.W S.1	R.W S.1	R.W S.1	R.W S.1	R.W S.1	R.W S.2	R.W S.2	R.W S.2	R.W S.4
	R.W S.4	R.W S.4								
31	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.N T.3	R.W S.3
32	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.3	R.C M.3	R.IT .1	R.N T.1	R.W S.3
	R.W S.4	R.W S.4								
33	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.N T.4	R.N T.4	R.W S.2	R.W S.3	R.W S.4	R.W S.4
34	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.N T.3
35	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.3	R.N T.3	R.N T.3
36	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.3	R.C S.1	R.N T.3
37	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.1	R.C M.2	R.C M.2	R.C M.2	R.C M.3

Table 8.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 8 Language Arts

38	R.CM.1	R.CM.1	R.CM.1	R.CM.3	R.CM.3	R.CM.3	R.CS.1	R.NT.3	R.WS.1	R.WS.2
	R.WS.2	R.WS.4								
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51	R.CM.1	R.CS.1	W.PR	W.PR	W.PR.1	W.PR.1	W.PR.1	W.PR.1	W.PR.2	W.PR.2
	W.PR.3	W.PR.3	W.PR.4	W.PR.4	W.PR.4	W.PR.5	W.GN	W.GN.1	W.GN.1	
	W.GN.1	W.GN.1	W.ST.1							
52	R.NT.2	W.SP	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.SP.1	W.GR.1
53	R.NT.3	R.WS.2	W.PR.5	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1	W.GR.1
	W.GR.1									
54	R.IT.1	R.IT.3	R.NT.4	R.NT.4	R.WS.2	R.WS.2	R.WS.2	R.WS.3	R.WS.3	W.PR.4
	W.ST.1	W.ST.1								
55	R.IT.1	R.IT.3	R.IT.3	R.NT.2	R.NT.3	R.NT.4	R.WS.2	W.PR.1	W.ST.1	W.ST.1
56	R.CS.1	R.IT.2	W.PR	W.PR.2	W.PR.3	W.PR.3	W.PR.4	W.PR.4	W.PR.5	W.PR.5
	W.GR.1									
57	R.CM.1	R.CS.1	R.CS.1	R.CS.1	R.IT.1	R.NT.4	W.PR	W.PR	W.PR.1	W.PR.2

Table 8.9
Objectives Coded to Each Item by Reviewers
Michigan Grade 8 Language Arts

	W.P R.4	W.P R.5	W.P R.5	W.G N.2	W.G N.2	W.S T.1

Table 8.10
Items Coded by Reviewers to Each Objective
Michigan Grade 8 Language Arts

Low		Medium		High
0		12.31707		123

R																				
R.CM																				
R.CM.1	1	1	1	2	4	4	4	4	4	4	5	5	5	5	5	5	5	6	6	6
	7	8	8	8	8	8	8	9	9	9	9	10	14	14	14	17	17	17	18	
	18	18	18	18	20	20	20	20	21	23	23	23	24	24	24	24	24	24	24	
	25	25	25	25	25	25	25	26	26	26	27	27	27	27	27	27	27	28	28	
	28	28	28	28	29	29	29	29	31	31	31	31	31	32	32	32	33	33	34	
	34	34	34	34	34	34	35	35	35	35	35	36	36	36	36	36	37	37	37	
	37	37	37	38	38	38	51	57												
R.CM.2	1	1	3	3	4	4	5	5	6	6	6	6	6	6	6	7	9	9	9	9
	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	12	12	
	12	12	12	12	12	12	12	13	13	14	14	14	14	15	15	15	15	15	15	
	17	18	20	21	21	21	21	21	22	23	24	25	25	26	26	26	26	26	26	
	27	29	29	29	29	31	31	31	32	32	33	33	34	34	35	35	36	36	37	
	37	37																		
R.CM.3	2	4	5	7	9	17	17	17	17	17	17	18	18	18	18	18	20	21	21	21
	23	24	27	29	32	32	35	36	37	38	38	38								
R.CM.4	4	13																		
R.CS																				
R.CS.1	11	12	22	36	38	51	56	57	57	57										
R.IT																				
R.IT.1	8	19	19	19	19	19	32	54	55	57										
R.IT.2	20	56																		
R.IT.3	2	3	3	3	3	3	4	7	7	7	7	7	7	8	8	9	13	13	14	20
	20	54	55	55																
R.NT																				
R.NT.1	19	22	26	32																

Table 8.10
Items Coded by Reviewers to Each Objective
Michigan Grade 8 Language Arts

R.NT.2	1	2	10	19	19	19	19	28	30	52	55									
R.NT.3	2	3	7	8	8	13	14	14	15	15	16	18	21	23	23	23	23	24	24	24
	25	25	27	28	28	28	31	34	35	35	36	38	53	55						
R.NT.4	1	2	2	2	3	3	19	20	23	23	24	28	28	33	33	54	54	55	57	
R.WS																				
R.WS.1	1	13	16	16	16	30	30	30	30	30	38									
R.WS.2	2	13	16	16	16	16	30	30	30	33	38	38	53	54	54	54	55			
R.WS.3	1	15	15	18	18	20	31	32	33	54	54									
R.WS.4	1	2	13	13	13	16	16	16	16	16	30	30	30	32	32	33	33	38		
W																				
W.PR	22	51	51	56	57	57														
W.PR.1	22	22	22	51	51	51	51	55	57											
W.PR.2	22	22	22	22	29	51	51	56	57											
W.PR.3	51	51	56	56																
W.PR.4	22	22	22	51	51	51	54	56	56	57										
W.PR.5	51	53	56	56	57	57														
W.GN	51																			
W.GN.1	22	51	51	51	51															
W.GN.2	21	22	22	57	57															
W.HW																				
W.HW.1																				
W.SP	52																			
W.S	52	52	52	52	52	52	52													

Table 8.10
Items Coded by Reviewers to Each Objective
Michigan Grade 8 Language Arts

P.1										
W.ST										
W.ST.1	51	54	54	55	55	57				
W.GR										
W.GR.1	52	53	53	53	53	53	53	53	53	56

Table 8.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 8 Language Arts

Low		Medium		High
1		5		10

R													
R.CM													
R.CM.1	1:3	2:1	4:6	5:7	6:3	7:1	8:6	9:4	10:1	14:3	17:3	18:5	20:4
	21:1	23:3	24:7	25:7	26:3	27:7	28:6	29:4	31:5	32:3	33:2	34:7	35:5
	36:5	37:6	38:3	51:1	57:1								
R.CM.2	1:2	3:2	4:2	5:2	6:7	7:1	9:4	10:8	11:9	12:9	13:2	14:4	15:6
	17:1	18:1	20:1	21:5	22:1	23:1	24:1	25:2	26:6	27:1	29:4	31:3	32:2
	33:2	34:2	35:2	36:2	37:3								
R.CM.3	2:1	4:1	5:1	7:1	9:1	17:6	18:5	20:1	21:3	23:1	24:1	27:1	29:1
	32:2	35:1	36:1	37:1	38:3								
R.CM.4	4:1	13:1											
R.CS													
R.CS.1	11:1	12:1	22:1	36:1	38:1	51:1	56:1	57:3					
R.IT													
R.IT.1	8:1	19:5	32:1	54:1	55:1	57:1							
R.IT.2	20:1	56:1											
R.IT.3	2:1	3:5	4:1	7:6	8:2	9:1	13:2	14:1	20:2	54:1	55:2		
R.NT													
R.NT.1	19:1	22:1	26:1	32:1									
R.NT.2	1:1	2:1	10:1	19:4	28:1	30:1	52:1	55:1					
R.NT.3	2:1	3:1	7:1	8:2	13:1	14:2	15:2	16:1	18:1	21:1	23:4	24:3	25:2
	27:1	28:3	31:1	34:1	35:2	36:1	38:1	53:1	55:1				
R.NT.4	1:1	2:3	3:2	19:1	20:1	23:2	24:1	28:2	33:2	54:2	55:1	57:1	
R.W													

Table 8.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 8 Language Arts

S									
R.WS.1	1:1	13:1	16:3	30:5	38:1				
R.WS.2	2:1	13:1	16:4	30:3	33:1	38:2	53:1	54:3	55:1
R.WS.3	1:1	15:2	18:2	20:1	31:1	32:1	33:1	54:2	
R.WS.4	1:1	2:1	13:3	16:5	30:3	32:2	33:2	38:1	
W									
W.PR	22:1	51:2	56:1	57:2					
W.PR.1	22:3	51:4	55:1	57:1					
W.PR.2	22:4	29:1	51:2	56:1	57:1				
W.PR.3	51:2	56:2							
W.PR.4	22:3	51:3	54:1	56:2	57:1				
W.PR.5	51:1	53:1	56:2	57:2					
W.GN	51:1								
W.GN.1	22:1	51:4							
W.GN.2	21:1	22:2	57:2						
W.HW									
W.HW.1									
W.SP	52:1								
W.SP.1	52:7								
W.ST									
W.ST.1	51:1	54:2	55:2	57:1					
W.GR									
W.G	52:1	53:8	56:1						

Table 8.11
Number of Reviewers Coding an Item by Objective (Item Number: Number of Reviewers)
Michigan Grade 8 Language Arts

R.1			

Table 8.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 8 Language Arts

Low DOK		Matched DOK		High DOK
1		5		10

R [2]:													
R.CM [3]:													
R.CM.1 [3]:	1:3[2.33]	2:1[2]	4:6[2.5]	5:7[2.29]	6:3[2.33]	7:1[2]	8:6[2.5]	9:4[2.5]	10:1[2]	14:3[2]	17:3[2]	18:5[2]	20:4[2]
	21:1[2]	23:3[2.67]	24:7[2.29]	25:7[2.29]	26:3[2]	27:7[2.43]	28:6[2.33]	29:4[2.25]	31:5[2]	32:3[2]	33:2[2.5]	34:7[2]	35:5[2.2]
	36:5[2]	37:6[2.33]	38:3[2.67]	51:1[3]	57:1[2]								
R.CM.2 [2]:	1:2[1.5]	3:2[1.5]	4:2[1.5]	5:2[2]	6:7[1.29]	7:1[2]	9:4[2]	10:8[1.88]	11:9[1.44]	12:9[1.33]	13:2[1]	14:4[1.75]	15:6[1.5]
	17:1[2]	18:1[2]	20:1[1]	21:5[1.6]	22:1[2]	23:1[2]	24:1[2]	25:2[2]	26:6[1.5]	27:1[1]	29:4[1.25]	31:3[2]	32:2[1.5]
	33:2[2]	34:2[2]	35:2[2]	36:2[1.5]	37:3[1.33]								
R.CM.3 [3]:	2:1[3]	4:1[3]	5:1[3]	7:1[3]	9:1[2]	17:6[1.83]	18:5[2.2]	20:1[2]	21:3[2]	23:1[2]	24:1[3]	27:1[3]	29:1[2]
	32:2[2]	35:1[2]	36:1[2]	37:1[2]	38:3[2.33]								
R.CM.4 [2]:	4:1[2]	13:1[2]											
R.CS [3]:													
R.CS.1 [3]:	11:1[3]	12:1[3]	22:1[3]	36:1[3]	38:1[3]	51:1[3]	56:1[2]	57:3[2.67]					

Table 8.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 8 Language Arts

R.IT [2]:													
R.IT .1 [2]:	8:1[2]	19:5 [1.2]	32:1 [3]	54:1 [2]	55:1 [1]	57:1 [2]							
R.IT .2 [2]:	20:1 [1]	56:1 [2]											
R.IT .3 [2]:	2:1[2]	3:5[2.4]	4:1[2]	7:6[2.5]	8:2[3]	9:1[2]	13:2 [1]	14:1 [2]	20:2 [1]	54:1 [1]	55:2 [2]		
R.NT [3]:													
R.NT.1 [2]:	19:1 [2]	22:1 [3]	26:1 [2]	32:1 [3]									
R.NT.2 [2]:	1:1[2]	2:1[2]	10:1 [1]	19:4 [1.5]	28:1 [3]	30:1 [1]	52:1 [2]	55:1 [2]					
R.NT.3 [3]:	2:1[2]	3:1[3]	7:1[3]	8:2[3]	13:1 [3]	14:2 [2.5]	15:2 [2.5]	16:1 [3]	18:1 [2]	21:1 [3]	23:4 [2.25]	24:3 [2]	25:2 [2]
	27:1 [2]	28:3 [2.33]	31:1 [2]	34:1 [3]	35:2 [2]	36:1 [2]	38:1 [1]	53:1 [3]	55:1 [2]				
R.NT.4 [3]:	1:1[2]	2:3[1.67]	3:2[1.5]	19:1 [3]	20:1 [2]	23:2 [2.5]	24:1 [2]	28:2 [2]	33:2 [2]	54:2 [1.5]	55:1 [3]	57:1 [3]	
R.WS [2]:													
R.WS.1 [2]:	1:1[2]	13:1 [2]	16:3 [2]	30:5 [1.8]	38:1 [3]								
R.WS.2 [2]:	2:1[2]	13:1 [2]	16:4 [1.75]	30:3 [2]	33:1 [2]	38:2 [2.5]	53:1 [2]	54:3 [1.33]	55:1 [2]				
R.WS.3 [1]:	1:1[2]	15:2 [1.5]	18:2 [2]	20:1 [2]	31:1 [1]	32:1 [2]	33:1 [2]	54:2 [1.5]					
R.WS.4	1:1[2]	2:1[2]	13:3 [1.6	16:5 [2]	30:3 [2]	32:2 [2.5]	33:2 [2.5]	38:1 [3]					

Table 8.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 8 Language Arts

[2]:			7]					
W [3]:								
W.PR [3]:	22:1 [3]	51:2 [3]	56:1 [2]	57:2 [3]				
W.PR.1 [3]:	22:3 [3]	51:4 [3.25]	55:1 [1]	57:1 [3]				
W.PR.2 [3]:	22:4 [3]	29:1 [2]	51:2 [3]	56:1 [3]	57:1 [3]			
W.PR.3 [3]:	51:2 [3]	56:2 [2]						
W.PR.4 [3]:	22:3 [3]	51:3 [3]	54:1 [2]	56:2 [1.5]	57:1 [3]			
W.PR.5 [1]:	51:1 [3]	53:1 [2]	56:2 [2]	57:2 [2.5]				
W.GN [4]:	51:1 [3]							
W.GN.1 [4]:	22:1 [3]	51:4 [3]						
W.GN.2 [4]:	21:1 [3]	22:2 [3]	57:2 [3]					
W.HW [1]:								
W.HW.1 [1]:								
W.SP [1]:	52:1 [1]							
W.SP.1 [1]:	52:7 [1]							
W.S								

Table 8.13
Assessment Item DOK vs Consensus DOK (Item Number: Number of Reviewers [Average DOK])
Michigan Grade 8 Language Arts

T [3]:				
W.ST.1 [3]:	51:1 [4]	54:2 [2]	55:2 [2]	57:1 [3]
W.GR [2]:				
W.GR.1 [2]:	52:1 [1]	53:8 [1.12]	56:1 [3]	