Kansas Gap Analysis Report:

Assessing Draft Common Core Standards in Mathematics and Reading

1/25/10

I. Process and Overview

Procedure

- We sent out approximately 70 requests and received 43 responses, split relatively evenly between math and English.
- 11 community colleges, 6 state universities and 4 independent colleges rated the Math standards
- 10 community colleges, 6 state universities and 4 independent colleges rated the English standards

General Responses

- Strong overall support for standards
- Some commented they feel they are idealized but nonetheless necessary
- General concern that students are not being prepared in middle and high school—which more or less begs our question
- Several comments from both math and English faculty that students are not learning the nuts and bolts (e.g., basic arithmetic, grammar)

II. Responses by Discipline

MATHEMATICS

A. *Standards Ranking*

Highest Ranked/least variation in scoring

Standard	Mean	Standard Deviation	Rank
4. Expressions	9.63	0.54	1.
2. Number	9.56	1.11	2.
5. Equations	9.33	0.65	3.
9. Coordinates	9.05	1.08	4.
3. Quantity	8.90	1.41	5.
1. Practice	8.87	1.35	6.
6. Function	8.32	1.38	7.

Lowest Ranked/wide variation in scoring

7. Modeling	7.34	2.03	8.
8. Shape	6.60	2.54	9.
11. Statistics	5.27	2.13	10.
10. Probability	5.06	2.13	11.

B. *Course on which Based*

- *College Algebra* mentioned by great majority
- *Calculus*

C. Suggested Additions

- Need for familiarity with technology, e.g., which tools to use and when to use them
- Teaching of basic arithmetic, preferably in primary grades; ability to add, subtract, multiply and divide without a calculator
- Solving non-linear inequalities

D. General Comments

- "My general overview is that students enrolled in my classes have a wide range of ability on numbers, equations and expressions." Those with "a decent ability" perform well in other areas; those with problems "continue to struggle".
- Students often arrive with "some understanding of how to manipulate symbols, but often without the "deep" understanding mentioned in the document."
- Many students are hostile to taking remedial mathematics (many avoid taking the Accuplacer test by enrolling online)
- Students "must start college with all of their basic skills already in place …to be able to go on to any other higher math class."
- Around 1998-99 started to get students who had never learned to factor polynomials; asked high school teacher friend, who said they had dropped it from the curriculum because it is not a state competency.
- Elementary system has 'set aside the teaching of the basics of arithmetic/mathematics"
- "Incoming students need to have the core meat-and-potato skills"

E. Comments about Individual Standards

- Rates Number, quantity, expressions, equation and functions a ten, but wishes students could "do these without the crutches of technology. These are skill developing topics."

- Feels that "we as math teachers at times have not sufficiently emphasized the core concepts listed under the Quantity standard."

- Functions: "Students need to understand that users of mathematics in a variety of disciplines generally consider expressions and equations first as functions, as models, rather than considering [them] as abstractions, devoid of any 'real' meaning."

- Core skills 1, 3, 4 and 5 should be mastered by the end of high school for all students."

- "The core practices we hold in highest regard are precision, perseverance, and strategic decision-making about the use of technological tools."

- Number and Quantity are "skills [that] should be mastered prior to the entry-level credit-bearing courses of college Algebra or Pre-calculus."

ENGLISH

A. *Standards Ranking*

1a. **Highest Ranked/least variation in scoring for Reading Informational and Literary Texts Standards**	**Mean**	**Standard Deviation**	**Rank**
4. Delineate the main ideas or themes in the text and the details that elaborate and support them.	9.32	1.00	1.
1. Determine both what the text says explicitly and what can be inferred logically from the text.	9.31	1.11	2.
10. Analyze how specific details and larger portions of the text contribute to the meaning of the text.	9.21	0.86	3.
3. Discern the most important ideas, events, or information, and summarize them accurately and concisely.	9.11	1.45	4.
17. Apply knowledge and concepts gained through reading to build a more coherent understanding of a subject, inform reading of additional texts, and solve problems.	9.00	1.49	5.
5. Determine when, where, and why events unfold in the text, and explain how they relate to one another.	8.95	1.31	6.
2. Support or challenge assertions about the text by citing evidence in the text explicitly and accurately.	8.95	1.47	7.
13. Ascertain the origin, credibility, and accuracy of print and online sources.	8.85	1.64	8.
16. Draw upon relevant prior knowledge to enhance comprehension, and note when the text expands on or challenges that knowledge.	8.80	1.40	9.
7. Determine what is meant by words and phrases in context, including connotative meanings and figurative language.	8.79	1.27	10.
14. Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing whether the evidence provided is relevant and sufficient.	8.74	1.88	11.

1b. **Lowest Ranked/wide variation in scoring for Reading Informational and Literary Texts Standards**	**Mean**	**Standard Deviation**	**Rank**
8. Analyze how specific word choices shape the meaning and tone of the text.	8.32	1.57	12.
18. Demonstrate facility with the specific reading demands of texts drawn from different disciplines, including history, literature, science, and mathematics.	8.32	2.02	13.
6. Analyze the traits, motivations, and thoughts of individuals in fiction and nonfiction based on how they are described, what they say and do, and how they interact.	8.21	1.24	14.
9. Analyze how the text's organizational structure presents the argument, explanation, or narrative.	8.21	1.78	15.
12. Extract key information efficiently in print and online using text features and search techniques.	8.16	2.24	16.
15. Analyze how two or more texts with different styles, points of view, or arguments address similar topics or themes.	7.94	1.73	17.
11. Synthesize data, diagrams, maps, and other visual elements with words in the text to further comprehension.	7.37	2.59	18.

2a. **Highest Ranked/least variation in scoring for Writing Standards**	**Mean**	**Standard Deviation**	**Rank**
5. Create a logical progression of ideas or events, and convey the relationships among them.	9.50	0.92	1.
1. Establish and refine a topic or thesis that addresses the specific task and audience.	9.44	1.01	2.
11. Assess the quality of one's own writing, and, when necessary, strengthen it through revision.	9.44	1.10	3.
3. Sustain focus on a specific topic or argument.	9.44	1.24	4.
12. Use technology as a tool to produce, edit, and distribute writing.	9.11	1.08	5.
2. Gather the information needed to build an argument, provide an explanation, or address a research question.	9.11	1.41	6.
17. Link claims and evidence with clear reasons, and ensure that the evidence is relevant and sufficient to support the claims.	9.11	1.60	7.
9. Demonstrate command of the conventions of standard written English, including grammar, usage, and mechanics.	9.06	1.35	8.
15. Demonstrate understanding of content by reporting facts accurately and anticipating reader misconceptions.	9.00	1.33	9.
10. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.	8.94	1.51	10.
4. Support and illustrate arguments and explanations with relevant details, examples, and evidence.	8.89	1.97	11.
8. Develop and maintain a style and tone appropriate to the task, purpose, and audience.	8.61	1.42	12.

2b. **Lowest Ranked/wide variation in scoring for Writing Standards**	**Mean**	**Standard Deviation**	**Rank**
16. Establish a substantive claim, distinguishing it from alternate or opposing claims.	8.67	2.78	13.
6. Choose words and phrases to express ideas precisely and concisely.	8.50	1.38	14.
7. Use varied sentence structures to engage the reader and achieve cohesion between sentences.	8.33	1.61	15.
14. Convey complex information clearly and coherently to the audience through purposeful selection and organization of content.	8.17	2.00	16.
18. Acknowledge competing arguments or information, defending or qualifying the initial claim as appropriate.	8.06	2.67	17.
13. Synthesize information from multiple relevant sources, including graphics and quantitative information when appropriate, to provide an accurate picture of that information.	7.17	2.55	18.

***3a.* Highest Ranked/least variation in scoring for Speaking and Listening Standards**	**Mean**	**Standard Deviation**	**Rank**
5. Listen to complex information, and discern the main ideas, the significant details, and the relationships among them.	9.58	0.75	1
7. Ask relevant questions to clarify points and challenge ideas.	9.37	0.81	2
8. Respond constructively to advance a discussion and build on the input of others.	9.26	0.71	3
2. Present information, findings, and supporting evidence clearly and concisely.	9.15	1.08	4
4. Demonstrate command of formal Standard English when appropriate to task and audience.	9.15	1.09	5

***3b.* Lowest Ranked/wide variation in scoring for Speaking and Listening Standards**	**Mean**	**Standard Deviation**	**Rank**
1. Select and use a format, organization, and style appropriate to the topic, purpose, and audience.	9.00	1.49	6
6. Follow the progression of the speaker's message, and evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.	8.79	1.58	7
3. Make strategic use of multimedia elements and visual displays of data to gain audience attention and enhance understanding.	7.26	1.85	8

B. *Course on which Based*

- English Composition I
- English Composition II

C. *Suggested Additions*

- Something on quality as expressed through style or voice; creation of effective oral arguments
- Something about "a student's ability to entertain alternative viewpoints"
- Issue of transferring and applying knowledge gained in one area to another
- While implicit in several headings, ability to think critically is a struggle for many students; would also like attention to writing and researching ethically

- More attention to collaborative learning and writing

- Instruction in the reading of multimedia texts, especially with regard to visual rhetoric

- Student accountability; "frightening increase in the number of students who will come to class but not submit any work or do any of the readings and still believe the end result should be a passing grade."

- Need to examine a topic in an innovative way rather than simply regurgitating the information

- Enter college with the ability to follow direction carefully and meet deadlines

D. General Comments

Critical Thinking/Analyzing Sources

- Too many students lack experience "assessing the academic acceptability of … sources, taking for granted that if 'it is printed (or just 'out there' online), it is there to be used."

- "seeing fewer students with the background experience—and thus the ability—to assimilate ideas from multiple texts and then apply those ideas to their own analytical assertions. More experience with this kind of use of other sources in their own analytical writing would be so helpful to students transitioning from the high school level to the college level." Tend to see students who can present "merely informational reports rather than analytical explanations and/or arguments" where conclusions are drawn from the evidence ascertained in various texts and then presented in their own writing."

- Important to "reference through practice, practice, and more practice the appropriate use of source material." I.e., direct quotation, paraphrase, summary

- More experience with research prior to college composition to help them understand "the appropriate use of source material" (again, quotation, paraphrase, summary)

Writing

- Some have little or no experience writing anything longer than one or two pages; cannot formulate a thesis and do not know how to support one once they do develop it

- May need to do research on whether colleges/universities emphasize "on-demand writing"

- More emphasis on revision as "a definition for writing itself"

- "writing is not taught at all if students do not have the opportunity to actually write about literary works"—"to make arguments, critiques and explications of specific texts"; important that texts get incorporated into writing assignments requiring students to marshal understanding of what they read

- Place very little emphasis on on-demand writing; "vigorously encourage and emphasize revision and multiple drafting"

- "the basic principle that students learn to write by writing is indisputable"

- Entering students seem to have less academic writing experience than five to ten years ago. "Spontaneous writing is not the same as structured writing…."

- Revision is crucial

- Audience awareness needs more attention

- Favors two narrative genres, the literacy narrative and autoethnography, which "situate personal experience within the larger contexts of language communities and cultural identities."

- Students coming with "less and less ability to write precisely"; although focusing too much on precision can impede ability to think critically

Reading

- Most entering students have "very little experience reading anything demanding—literature or non-fiction—and have very poor comprehension skills—both listening and reading"

- Drastic increase in the number of students claiming not to have read very much

- "high school students who are introduced and held accountable to reading texts for analytical purposes are much better prepared for the appropriate expectations of reading and writing about texts in the two college composition courses"

Grammar

- Problems with Standard English (grammar, syntax, mechanics, etc.)

- "The majority of my students have no idea what a noun, verb, adverb and a preposition are if they are asked to identify them in a sentence."

- Teach/reinforce English grammar in high school; most students say they had grammar and punctuation in middle school but little if any in high school

Other

- Some students cannot use technology as a tool to produce, edit, distribute writing

- Concern that students emphasize multimedia techniques while failing to cover the substance of the subject in question

- "Typical skills brought to my institution are often far below these standards"; as written, standards are "necessarily realistic, but—currently—unreachably idealistic."

- Help students understand relationship between structure and content

- Emphasize the interaction between reading and writing more
- Concern that the Complexity standard defines success in exclusively individual terms; failing to recognize that much complexity must be addressed collaboratively
- While collaboration has merit, “students should have experience of individual research projects, not relying on others in a group--….”
- Discussion skills; listening and speaking
- Wants to emphasize the standards in grades 4-6
- Growing number of students who “privilege evidence at the expense of their own ideas.”
- Need to address concurrent/dual credit option within P-20 discussion
- Ability to type/keyboarding