

Preliminary Findings: Fidelity of Cognitive CoachingSM

Prepared for the Kentucky Center for Mathematics

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July 1, 2009



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Introduction

In March of 2009, the Kentucky Center for Mathematics (KCM) contracted with The Center for Evaluation and Educational Policy (CEEP) to work with the Mathematics Coaching program to assess the extent to which trained coaches in the Mathematics Coaching program were implementing the Cognitive CoachingSM framework with quality and fidelity. To accomplish this analysis, taped coaching conversations between senior coaches and members of the teaching staff at their schools and corresponding observation materials were reviewed by CEEP. Through the review of this data as well as a review of the Cognitive CoachingSM training materials, allowed the CEEP assessor to determine whether the trained coaches were conducting their coaching conversations with high levels of quality and fidelity to the model.

The first phase of this process has consisted of reviewing the submitted taped coaching conversations and the supporting video observation documents. As the number of taped conversations and corresponding observation documentation continues to amass, greater analyses of these data will enable CEEP and KCM to develop a greater understanding of how the coaching conversations are translating into observable changes in the classroom and ultimately how these changes impact student learning outcomes in participating schools.

Video Observations

In May of 2009, ten taped coaching sessions were submitted to CEEP for initial review (only nine were able to be reviewed due to technical reasons). Of these ten sessions, six were examples of reflecting conversations, and four were planning conversations.

In addition to the ten taped conversations, eight Video Observation Forms and transcripts were completed by coaches and were provided to CEEP for review (two of these forms were previous versions of the Video Observation Form). These forms were used to assess several dimensions of fidelity to the Cognitive CoachingSM model. The coaches completed these forms as a way of double checking their adherence to the steps of the conversation, the impact of their use of resources on rapport with their coachee, as well as providing an opportunity for coaches to systematically review their language to insure that they were not using language or feedback that was judgmental or inferential, but rather providing meditative feedback.

Coaches also transcribed their coaching conversations to notate their use of questions, how they were crafting their questions, the coachee's response, how the coach paraphrased the coachee's response as well as other elements of the conversation such as cognitive shifts and the approachableness of the coach. Both the video observation form and the conversation transcripts were used by the CEEP assessor to determine the extent to which coaches are engaging in coaching conversations with high fidelity to the Cognitive CoachingSM model.

While the above procedure assesses the extent to which the coach interprets their actions and behaviors as being consistent with the Cognitive CoachingSM model, the CEEP external observer also viewed the coaching sessions and completed the Video Observation Form for each of the taped coaching sessions prior to reviewing the documents provided by the coach. By completing a separate Video Observation Form before reviewing the coach's self assessment, the assessor was blind to the coach's personal impression of the conversation and this procedure provided information on whether the coaches were providing a reliable self assessment data.

Based on the results of the coaches' self assessments, the coaches are implementing the Cognitive CoachingSM model with a high level of fidelity as evidenced by the following results:

- Based on the coach-completed video observation forms, all coaches addressed each step of the respective coaching conversation (planning or reflecting)
- Either the coaches did not have cognitive coaching materials present, or they did not use those materials
- None of the coaches reported consulting or collaborating
- Rapport scores ranged from 5 to 7 on a scale of one to seven (one, meaning "rarely established rapport with coachee" and seven meaning established rapport with the coachee "all of the time"). The average rapport rating was 6.14 on the seven point scale.
- With respect to feedbacks and set asides, the coaches did not report using any of the following: Judgment, Inference, Autobiographical, Inquisitive, or solution listening, and there was no evidence of predetermined conversation.
- One coach stated that she had found one incidence of personal observation during her coaching session

Although these results are based on the self assessment conducted by the coaches, a comparison of these results with those of the external assessor demonstrates very similar findings. Of the six conversations with complete data from the coach and the external assessor, there was only one difference with respect to the coaches' completion of the associated conversation "steps". There were a few discrepancies (2) between the coaches' ratings on whether or not coaching materials were present. It is likely that these minor discrepancies are a result of the limitations of taped conversations. It is possible that either the external assessor did or did not see the materials because they were either out of the camera range or the materials present were not actual coaching resources. It should also be

noted that although there were a few minor inconsistencies in whether or not the assessor and the coach agreed on the presence of the materials, there was unanimous agreement on whether or not these materials interfered with rapport (none).

The only other measurable difference between the self evaluations by the coaches and the external observer was related to the degree of rapport between the coach and the coachee. The average rapport score reported by coaches was 6.14, whereas the average rapport score on the coaching conversations rated by the external observer was 6.8. This discrepancy would seem to indicate that the external observer rates the coaches higher than they rate themselves.

Although there are some slight discrepancies between the self evaluations and those of the external assessor, there seems to be a general agreement between the coaches' self evaluations and those of the external assessor. This would indicate that the coaches are reliable at evaluating their fidelity to the Cognitive CoachingSM model.

Coaching Conversation Transcripts

Upon reviewing the conversation transcripts, it is evident that the coaches are utilizing the elements of invitation and use approachable and credible voice all the time during their conversations. Additionally, coaches provided evidence that they are using plural forms, exploratory language as well as positive suppositions during their coaching conversations. A mix of question types was used by all of the coaches during the conversations that were submitted for analysis.

While the majority of the transcripts that were reviewed included the three types of paraphrases: acknowledging and clarifying, summarizing and organizing, and shifting conceptual level, there were a few conversations that seemed to lack paraphrases that were designed to shift the conceptual level and focus of the person being coached. It is possible that coaches could benefit from additional practice or tips on how to accomplish this during their coaching conversations.

Generally, coaches seem to be doing an effective job at waiting for the coachee to respond pausing, paraphrasing and asking meditative questions. Also, it is evident from both the transcripts as well as the actual taped conversations that the coaches are serving as guides during the conversations, but the coachees are actually doing the majority of the talking during the coaching conversations. The coachees overall seem to be comfortable with the process and appear to have a good relationship with their coach which translates into natural and free flowing conversations.

Conclusions and future directions

These preliminary findings indicate that the senior math coaches have been conducting coaching conversations with teachers in their schools with high levels of quality and fidelity to the Cognitive CoachingSM model. Coaches seem familiar with the different components of both planning and reflecting conversations and are able to guide their coachees through the different steps of these conversations while maintaining good rapport, and providing positive feedback without being judgmental, solution focused or evaluative.

Although not specifically measured by coaches, the external observer has noted that there seems to be less time devoted by the coaches to asking the coachees to reflect on the coaching they have received during the session. Typically coaches spend between one to three minutes on this aspect of the conversation in the videos that were submitted for review. Since this aspect of the conversation requires the coachee to think conceptually about the coaching process, and envision its impact on the coachee's practice it might be useful for the coaches to allow for additional time to explore this dimension during their conversations.

As was mentioned previously, this report represents a preliminary analysis of the fidelity of the Cognitive CoachingSM component of the Mathematics Coaching program overseen by the Kentucky Center for Mathematics. These findings are based on the review of the first set of recorded coaching sessions and corresponding documentation submitted by senior math coaches who have been fully training in Cognitive CoachingSM by staff from the Center for Cognitive Coaching. As additional math coaches complete this training and submit taped coaching conversations, these additional data will be added to this data set and additional analyses will be performed to continually assess the extent to which math coaches are conducting coaching conversations with fidelity to the Cognitive CoachingSM framework.

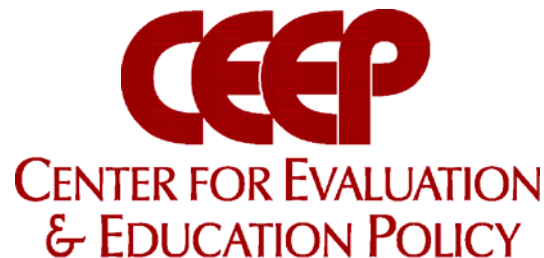
Future evaluation work also will center on the influence of the coaching program on the classroom practices of teachers who have received coaching from a math coach in their school. These changes will be assessed using the Survey of Enacted Curriculum in a pre-post-test model with teachers working in schools with a math coach. This model will collect teacher level data in schools with "freshmen" coaches and then reassess these teachers once their coaches have reached "senior" and "alumni" status. In conjunction with measuring changes in teacher behavior, future evaluation work will also examine changes in student academic outcomes by comparing school level academic achievement in schools with math coaches as compared to matched schools without coaches in place. Both of these evaluation activities will move past providing formative and process related evaluation results to look at the longer term and outcome based impact of the math coaching program as a whole.

PRELIMINARY FINDINGS:
Fidelity of Cognitive CoachingSM
Conversations

PREPARED FOR:
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January, 2010



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Introduction

As part of the Kentucky Center for Mathematics (KCM) Coaching Program, the Center for Evaluation and Education Policy (CEEP) was contracted to serve as an outside evaluator to assess the extent to which coaches trained in the Cognitive CoachingSM model were conducting coaching conversations with high quality and fidelity.

As a component of the coaching program, coaches are required to submit recorded conversations to KCM monthly. These conversations, along with self assessments are forwarded to CEEP for external review and assessment. To accomplish this analysis, taped coaching conversations between senior coaches and members of the teaching staff at their schools and corresponding observation materials were reviewed by CEEP. This process allows the CEEP assessor to determine whether the trained coaches were conducting their coaching conversations with high levels of quality and fidelity to the model.

The first phase of this process has consisted of reviewing the submitted taped coaching conversations and the supporting video observation documents. As the number of taped conversations and corresponding observation documentation continues to amass, greater analyses of these data will enable CEEP and KCM to develop a deeper understanding of how the coaching conversations are translating into observable changes in the classroom and ultimately how these changes impact student learning outcomes in participating schools.

Video Observations

In September and October of 2009, nine additional videos were submitted to the Center for Evaluation and Education Policy (CEEP) for an assessment of their fidelity to the Cognitive CoachingSM model. Of these videos, only eight were able to be assessed for fidelity due to technical problems with one recorded conversation. Included in these eight assessed conversations were three reflecting conversations, three planning conversations, one reflection into planning conversation and finally, one problem solving conversation. While the majority of the conversations were one-on-one coaching situations, two of the videos submitted were examples of group coaching conversations.

There are several components that influence whether a coaching conversation is being implemented with quality and fidelity. During the Cognitive CoachingSM training, coaches are taught the steps that each conversation should develop and issues that should be addressed, how to establish and maintain rapport with their coachee, how to paraphrase the coachee, the appropriate feedback and questioning that the coach should engage in, as well as how to encourage open dialogue with the coachee. All of these components are assessed by the coach after review of their taped session and recorded on a video observation and transcript forms.

Prior to reviewing a coach's self assessment, the CEEP assessor views each recorded conversation while completing both the video observation and a transcript form. This procedure allows for an unbiased assessment of the quality and fidelity of the coaching conversation. After each conversation is assessed by the CEEP assessor, then the coach's self assessment can be compared to the CEEP assessment and any discrepancies can be noted.

Utilizing these procedures, the following statements can be made about the coaches' self assessments:

- Coaches occasionally leave out a conversation step, but this tended to occur either when engaging in a reflection into planning conversation or at the end of the conversation when the coach asks the coachee to reflect on the conversation process
- Coaches tend to not use Cognitive CoachingSM resource materials during their conversations
- When used, these resource materials do not significantly impact rapport between the coach and the coachee
- Most coaches avoid engaging in consulting
- Coaches have a high degree of rapport with their coachee
- Although coaches are trained to avoid evaluative feedback or set asides, when they do use them, they make note of them on their video observation form
- There were two conversations that seemed to be predetermined – these were group coaching sessions and it is possible that the coach felt that due to the nature of this type of coaching that they needed an agenda prior to beginning the conversation

These findings would indicate that coaches are providing valid self assessments and are not hesitant to report that they occasionally struggle with the multiple aspects of conducting a coaching conversation with high quality and fidelity.

In comparison, to the self assessments, the CEEP rater also observed some of the issues that coaches noted on their self assessments. In general, the CEEP assessor was in agreement with the coaches' self assessments. The biggest difference between the independent CEEP assessments and the coaches self assessments was in their rapport scores. The independent CEEP assessor's rating of rapport averaged a 6 on a 7 point scale, whereas coaches reported an average rapport score of 6.33 on the 7 point scale.

Additional comparisons between the self assessments and the CEEP assessment indicates that coaches are providing valid critiques of their performance and that the self assessment process enables the coach to reflect on their performance in hope of improving their craftsmanship of the Cognitive CoachingSM model.

Coaching Conversation Transcripts

Upon review of the transcripts, it is evident that coaches are utilizing paraphrases effectively and are incorporating the “acknowledge and clarify” as well as the “summarize and organize” types of paraphrases predominately, and the “shift conceptual level” less frequently. While coaches do report using an occasional yes or no question, the majority of questions are mixed between probing and inquiry questions. Relying less on yes or no questions allows for a better flow to the coaching conversations and allows for greater insight into the coachee’s learning and process.

Coaches seem somewhat less focused on indicating whether or not they are including all elements of an invitation in their questioning on the transcript form, but based on the CEEP assessment, most questions are using plural forms, exploratory language and positive suppositions.

In general, the transcripts also indicate that the coaches are providing ample wait time and that coachees tend to guide and are responsible for the bulk of the conversation. This would indicate that coaches are letting their coachees express their thoughts and views without the coach dominating the conversation.

Comparison to Prior Conversation Analyses

The coaching conversations presented in this preliminary report represent the second group of coaching conversations analyzed by CEEP and consist of conversations that have occurred during the first two months of the school year. In comparison to the coaching conversations analyzed at the end of the 2008-2009 school year, these conversations are being conducted with good fidelity to the model, but there is more room for growth than was observed in the earlier group of conversations.

While overall these conversations were conducted with fidelity, there were a few coaches who left out a step of the conversations and there were a few instances of personal observation or non meditative feedback provided by the coach. Additionally, there were a handful of conversations that seemed predetermined rather than organic and tailored to the coachees’ needs. Clearly these are all areas where additional practice and self reflection could result in conversations with even greater quality and fidelity.

Despite these shortcomings, the process of practicing the conversations and engaging in the self assessment process should improve their consciousness and enable them to improve their overall craftsmanship during the school year. As this fidelity monitoring process continues through the school year and the submission of additional conversations, it is expected that coaches will continue to improve the quality and fidelity of their coaching conversations.



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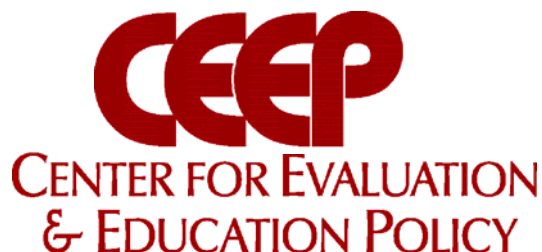
Mathematics Coaching Program

COGNITIVE COACHINGSM FIDELITY ASSESSMENT AND SURVEY OF ENACTED CURRICULUM

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Introduction

As part of the Kentucky Center for Mathematics (KCM) Coaching Program, the Center for Evaluation and Education Policy (CEEP) was contracted to serve as an outside evaluator to assess the extent to which coaches trained in the Cognitive CoachingSM model were conducting coaching conversations with high quality and fidelity, the impact of the program on the instructional practices of the teachers, and compare the performance of students in coaching schools to students in matched schools where no coaches were present.

As a component of the coaching program, coaches are required to submit recorded conversations to the KCM monthly. These conversations, along with self assessments were forwarded to CEEP for external review and assessment. To accomplish this analysis, taped coaching conversations between senior coaches and members of the teaching staff at their schools and corresponding observation materials were reviewed by CEEP. This process allowed the CEEP assessor to determine whether the trained coaches were conducting their coaching conversations with high levels of quality and fidelity to the model.

The impact of focused, school-level instructional coaches been studied for both reading (Richard, 2003) as well as mathematics (Obara & Sloan, 2009) and have been found to have an impact on the instructional strategies used by teachers in their classrooms. Since the Kentucky Mathematics Coaching program was also deigned to ultimately help teachers be reflective of their instructional techniques and adopt instructional strategies to maximize student learning, the Survey of Enacted Curriculum (SEC) was used to measure the difference in instructional practices over the course of the school year. The SEC is an instrument designed to assess instructional content (Blank, Porter, & Smithson, 2001; Porter, 2002) and has been used to measure the impact of professional development teachers' classroom instruction (Blank, 2004).

Ultimately, programs that seek to facilitate teacher growth and improve instructional practices also typically aim to translate those changes into a measurable increase in student achievement (Campbell, 1996; Zhang, McInerney & Frechtling, 2010). To determine whether students from schools with mathematics coaches were improving their mathematics achievement CEEP matched schools with senior or alumni coaches (coaches who were part of the first cohort of coaches) to schools without a coach and then compared the percentage of students who scored "proficient or distinguished" on the Kentucky Core Content Test (KCCT) in the years since their school began participation in the KCM's Coaching program.

This report presents the results of the work CEEP completed for the KCM during the 2009-2010 academic year: The Cognitive CoachingSM Fidelity assessment, the results of the SEC administered in the fall of 2009 and again in the spring of 2010, and the comparison of KCCT data among matched participating and non participating schools. These data provide information on the extent to which coaches were engaging in high quality coaching conversations with fidelity to the Cognitive CoachingSM

model, to what extent teachers' instructional behaviors changed over the course of the school year, and how mathematics achievement changed throughout the duration of the program, as well as any differences between schools with coaches and schools without mathematics coaches.

Video Observations

February through June, 2010, 15 additional recorded taped observations were submitted for a review of their quality and fidelity to the Cognitive CoachingSM model. Of the 15, fourteen of the conversations were able to be reviewed for fidelity (one of the DVDs was blank). These conversations were the third group of DVDs submitted for review and of the fourteen reviewed DVDs, four were Planning conversations, seven were Reflecting conversations, and three were Reflecting into Planning conversations.

Of the fourteen conversations, 13 Video Observation forms and transcripts completed by the coaches were submitted with the DVDs. The Video Observation forms served as a concrete way for coaches to review their conversations, critique their performance, and determine areas where they would like to improve as a coach.

Coaches also transcribed their coaching conversations to review their use of language, the types of questions and paraphrases they used, as well as the general rhythm of the conversation (appropriate use of wait time, for example). In addition to serving as a tool for the coaches to reflect on their process, both the video observation form and the conversation transcripts were used by the CEEP assessor to determine the extent to which coaches were engaging in coaching conversations with high fidelity to the Cognitive CoachingSM model.

To ensure that the CEEP external assessor was reviewing the conversations without bias, the assessor watched the videos and completed a video observation form for each conversation prior to reviewing the documents provided by the coach. By completing a separate Video Observation Form before reviewing the coach's self assessment, the assessor was blind to the coach's personal impression of the conversation and this procedure provided information on whether the coaches were providing a reliable self assessment data.

Coach Self Assessments

Upon reviewing the coaches self assessments it appears that not all coaches felt they were completing each step of their conversation. Five self assessments indicated the coach had not completed each step of the conversation (some coaches only indicated which map they used rather than checking off the specific steps completed during the conversation). Each of these conversations took place in the first semester of the school year. None of the self assessments for conversations that occurred in the second semester showed the same mistake, so it is possible that these omissions are an example of growth and improved fidelity in the second semester of coaching.

The second dimension of the self assessment asked coaches to indicate if resource materials were present, and if so, did their use impact the rapport between the coach and the coachee. Only five of the coaches reported using resource materials and none of these coaches felt that their use interrupted rapport. This would indicate that a majority of the coaches felt they did not need to rely on resource

materials, and even the coaches who used resource materials had enough familiarity with the Cognitive CoachingSM model that they did not have to rely on the materials in such a way as to negatively impact the conversation.

While coaching conversations are designed to be meditative and are not intended to be used as a tool for the coach to give “expert” advice or engage in a collaborative process with the coachee, there can be times when a coachee requests that the coach consult or collaborate with them. In these cases, the coaches are allowed to engage in these roles temporarily, but there are a series of steps that coaches should take when shifting roles during the conversation. Of the 12 conversations submitted, only one coach indicated that they collaborated with their coachee. The coach did indicate that their coachee did want to collaborate and the coach was able to return to their role as coach. Based on their self assessment, it appears that the coach did not ask for permission to collaborate, nor did the coach give a distinct non-verbal indication that the coach had changed function.

Given these results, it appears that many coaches tend to maintain a meditative role and avoid engaging in consulting and collaborating functions. When coaches do engage in these added functions, coaches make an attempt to follow the appropriate steps, but can miss a few of the more subtle nuances of the shift.

Since being in rapport with the coachee is a crucial component of coaching conversations, the video observation form requires the coach to indicate on a seven point scale how often the coach is in rapport with their coachee. The scale ranges from 1 (rarely in rapport) to 7 (in rapport all of the time). Scores ranged from 4 to 6 and the average rating was 5.1, indicating coaches were in rapport most of the time with their coachee.

Based on these data, coaches appear to be implementing the Cognitive CoachingSM model with a high level of fidelity as evidenced by the following results:

- Most coaches addressed each step of the respective coaching conversations (planning, reflecting or reflecting into planning)
- Either the coaches did not have cognitive coaching materials present, or their use did not interfere with maintaining rapport with the person they were coaching. None of the coaches reported consulting or collaborating
- Rapport scores ranged from 4 to 6 on a scale of one to seven (one, meaning “rarely established rapport with coachee” and seven meaning established rapport with the coachee “all of the time”). The average rapport rating was 5.1 on the seven point scale.
- With respect to feedbacks and set asides, the coaches did not report using any of the following: Judgment, Inference, Autobiographical, Inquisitive, or solution listening, and there was no evidence of predetermined conversation.

External Assessment

Although the self reflection process is an important skill for coaches to use to improve their craftsmanship and fluency with the model, an assessment of fidelity also requires an independent assessor to review the coaching conversations and complete an external review of the conversation. As was mentioned previously, coaching conversations were reviewed by an assessor who did not consult the self assessments prior to completing the observation form. Although blind to the observation forms completed by the coaches, the assessor completed the eight day Cognitive CoachingSM Foundations Seminar ensuring that the assessor was familiar with the nuances of the Cognitive CoachingSM model.

Although the external assessment yielded very similar results to those of the coaches' self assessments, there were a few notable exceptions. As noted in the previous section, there were several coaches that did not indicate they completed all of the conversation steps; however, the external assessment did not find the same results.

Of the five coaches who indicated they did not include each of the steps in their conversation, the external assessor rated three of them as having completed all of the steps. The remaining two conversations were each missing one step, although the coaches indicated they were missing all of the steps and only indicated which map they were using.

This discrepancy would seem to indicate that coaches either neglected to check off having completed the specific steps, or that they were overly critical of their performance. Regardless of the reason, it is apparent that coaches are familiar with the different conversation maps and are able to navigate the different maps effectively.

As with previous reviews of coaching conversations, the external assessor tended to score the coaches higher on the rapport scale than the coaches rated themselves. The external assessor's ratings of the coaches' rapport for these coaching conversations ranged from 5 to 7 with an average rating of 5.88. This indicates coaches were in rapport with the person they were coaching the majority of the time and had mastered the techniques and behaviors needed to show that they were in rapport with their coachees.

Coaching Conversation Transcripts

The second component of the coaching conversation fidelity assessment completed by coaches is the conversation transcript. This form is used by coaches to transcribe the paraphrases and questions used by the coach during the recorded conversation as well as the pattern of questions, pauses, and responses. Once the questions, responses, and patterns are transcribed, coaches then classify the paraphrases and questions and check their questions to determine if they are using positive suppositions, plural forms and exploratory language when posing questions to their coachee.

During the Cognitive CoachingSM Foundations seminar, coaches are taught that their conversations should be structured in a way that poses a question (either to elicit thought and reflection, or probe for additional meaning), provides a pause to allow the coachee to consider their response and give it, followed by the coach offering a paraphrase of the coachee's response to check for understanding, organize the coachee's thoughts, or pose a conceptual shift.

The process of transcribing their questions and responses, as well as the patterning of the conversation is a concrete opportunity for the coaches to examine their efficacy and improve their questioning and paraphrasing craftsmanship. The analyses of these transcripts indicates that the coaches are patterning their conversations in a manner that is consistent with the Cognitive CoachingSM model, are providing coachees with appropriate wait time, and are facilitating the conversation without monopolizing it.

When reviewing the transcripts it was apparent that coaches are using the range of paraphrase and questioning techniques. Coaches seem to be most comfortable using the Acknowledge and Clarify and the Summarize and Organize paraphrases more than the Shift Conceptual Level paraphrase. Likewise, coaches tend to also use more Inquiry questions than they use Probing questions. Coaches generally are successful at avoiding yes or no questions. Only a handful of coaches used this question type once or twice in their conversations.

Although many coaches did not check off if they were using the elements of invitation, based on the transcripts, it is evident that coaches are skilled at using plural forms, maintaining a positive supposition and using exploratory language.

Comparison to Prior Conversation Analyses

The coaching conversations presented in this report represent the third group of coaching conversations analyzed by CEEP and consist of conversations that occurred between November, 2009 and May, 2010. These conversations were submitted by the 2009-2010 “freshman” coaches (new coaches being trained in Cognitive CoachingSM during the 2009-2010 academic year). This is the second group of conversations submitted by these freshman coaches. In comparison to previously submitted coaching conversations by freshman coaches analyzed at the beginning of the 2009-2010 school year, the coaches seem more comfortable with the conversation steps and rely less on the conversation maps. Additionally, the coaches began to engage in the reflecting into planning conversation with their coachees. None of the previously submitted DVDs in the 2008-2009 or the earlier 2009-2010 conversations contained an example of this type of conversation.

Overall the conversations submitted for analysis were conducted with fidelity and provided meditative opportunity for the coachees to focus and reflect on their own processes. Coaches seemed to have the trust and respect of their coachees and were effective at maintaining rapport throughout the conversation. While this group of coaches seemed to rely on the coaching maps more so than coaches in the previous cohort, their use did not impede the flow of the conversation. It is likely that continued and more frequent conversations will enable coaches to feel less of a need to rely on those resources in future conversations.

Impact on Classroom Practice

This year, in order to assess the extent to which the classroom practices of coachees change over the course of the school year, the Survey of Enacted Curriculum – Mathematics (SEC) was given to senior and freshman coachees at the beginning of the school year and then again at the end of the school year (See <http://seconline.wceruw.org/Reference/K12mthSurvey.pdf> for a copy of the SEC). As was noted earlier, the SEC is designed to measure the content of teachers’ instruction. By comparing senior and freshman coachees at two points in the school year it was thought that changes in each of the groups could be observed, while also allowing a comparison between freshman and senior coachees at each of the two points in the school year.

Although a matched comparison at time one and time two would have been ideal for observing change over time, only a small number of freshman and senior coachees who took the SEC at the beginning of the year also took the SEC at the end of the year. This poor response rate impacted the ability to track meaningful change over time. See table 1 for a breakdown of the response rate for both data collection points.

Table 1.
Number of responses by respondent type and data collection point

Type of respondent	Number taking SEC in Fall	Number taking SEC in the Spring	% of sample with matched data
Freshman Coachee	163	31	19%
Senior Coachee	76	6	7.9%

Although it is not possible to determine if freshman or senior coachees changed their classroom practices over the course of the school year, it is interesting to compare the differences between cohorts at each administration. Since the senior coachees worked with a coach during the prior school year, and freshmen coachees had yet to work with their coach, this comparison, although not scientifically rigorous, presents an illustration of the potential impact working with a coach has on the instructional practices of coachees.

Results of the Survey of Enacted Curriculum

Tables two and three present the average percent of time coachees and coaches report spending engaging in specific instructional activities in their target class. These tables indicate that although the average percent of time engaged in activities differ between senior and freshman coachees, the activities that occupy the three largest percentages of instructional time in the fall are the same for both cohorts of coachees (using manipulatives, watching the teacher demonstrate, and working in pairs or small groups). Likewise, both cohorts of coaches were engaged in the same three activities that occupied the largest percentage of their instructional time in the fall (working in pairs or small groups, using technology, and completing computational exercises).

Table 2. Percent of classroom time spent on tasks - Coachees

How much of the mathematics instructional time do students engage in the following tasks:	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
25. Watch teacher demonstrate	13.29%	11.43%	10.75%	8.29%
26. Read about math-not in textbook	3.71%	3.14%	2.17%	2.91%
27. Take notes from lecture or textbook	3.07%	4.43%	2.61%	7.86%
28. Complete computational exercises	10.46%	9.50%	8.24%	9.09%
29. Present solutions to the whole class	9.45%	8.58%	6.85%	11.21%
30. Use manipulatives or data collectors	16.27%	13.75%	19.02%	9.12%
31. Work individually on math problems/tasks	10.84%	10.91%	10.93%	4.81%
32. Work in pairs or small groups on math	12.58%	14.19%	13.92%	15.46%
33. Math activity w/class outside the classroom	2.30%	2.99%	2.54%	2.78%
34. Use technology to learn math	9.18%	10.66%	12.08%	21.74%
35. Maintain/reflect on math portfolio of own wk	2.36%	3.56%	1.71%	2.73%
36. Take a quiz or test	6.48%	6.87%	9.18%	4.00%

Table 3. Percent of classroom time spent on tasks - Coaches

How much of the mathematics instructional time do students engage in the following tasks:	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
25. Watch teacher demonstrate	10.99%	8.77%	13.37%	5.13%
26. Read about math-not in textbook	2.43%	1.76%	2.73%	2.56%
27. Take notes from lecture or textbook	4.11%	6.14%	5.80%	5.13%
28. Complete computational exercises	13.26%	9.18%	10.56%	5.13%
29. Present solutions to the whole class	10.63%	9.25%	9.53%	5.13%
30. Use manipulatives or data collectors	11.46%	12.26%	10.45%	20.51%
31. Work individually on math problems/tasks	7.65%	7.82%	9.94%	5.13%
32. Work in pairs or small groups on math	11.32%	17.40%	10.56%	12.82%
33. Math activity w/class outside the classroom	4.07%	2.83%	2.93%	20.51%
34. Use technology to learn math	15.16%	14.07%	15.66%	12.82%
35. Maintain/reflect on math portfolio of own wk	3.24%	2.58%	2.12%	2.56%
36. Take a quiz or test	5.67%	7.96%	6.37%	2.56%

The SEC also asks respondents to indicate how often they use specific strategies for assessments, what influences the material they chose to cover in their classes, classroom instructional readiness, and teacher opinions and beliefs. See Appendix A for the frequency results for these items.

Although inference on changes in instructional practices could not be drawn from these data, there is evidence to indicate that coaches and coachees in one cohort tend to spend similar percentages of time in the same types of activities as their respective counterpart in the other cohort. Additionally, it is interesting to note that coaches seemed more likely to use technology in their instruction than were coachees surveyed at the beginning of the school year.

Both coachees and coaches reported engaging in a wide variety of instructional strategies and neither group seemed to rely heavily on one particular instructional strategy. This would indicate that the schools or districts these teachers are working in are supportive of teachers' usage of multiple instructional strategies.

Comparison of Academic Achievement

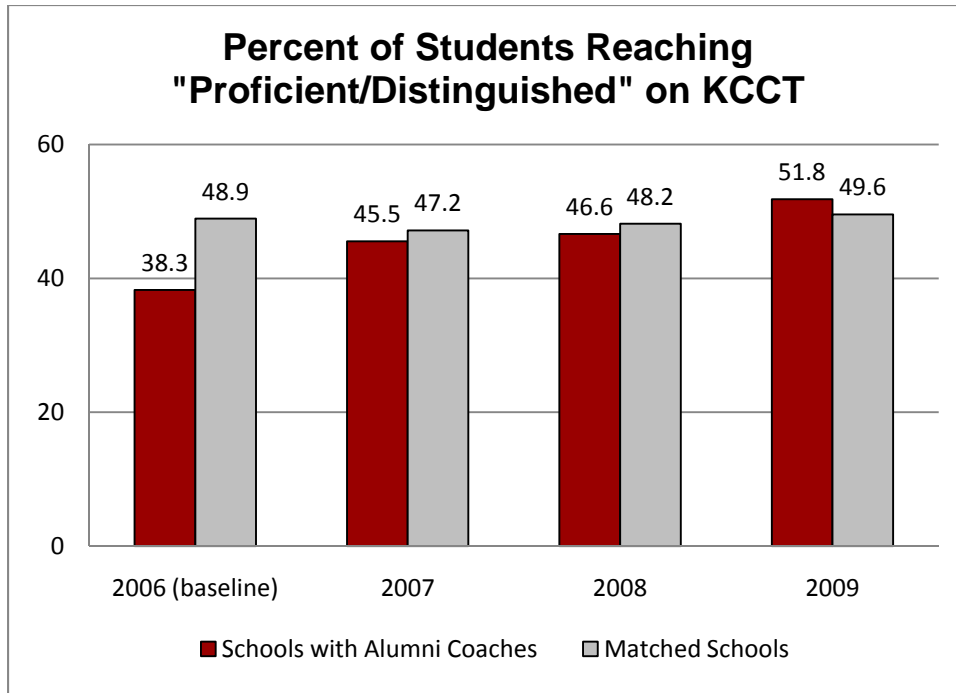
In order to determine if there were meaningful differences in mathematics achievement in schools with mathematics coaches as compared to schools without coaches, a list of matched schools was developed with the help of the Kentucky Department of Education's Demographic Profiler. The demographic profiler (the 2007 and 2008 versions can be found at the following site:

<http://www.education.ky.gov/KDE/Administrative%20Resources/Testing%20and%20Reporting%20/District%20Support/Tools%20and%20Resources/KDE%20Data%20Tools.htm>) allows users to sort, select, and gather school level KCCT data based on demographic characteristics.

The list of matched comparison schools was developed by first selecting schools of a similar size to each school with a mathematics coach. Data from schools with similar enrollment were exported into excel so that the schools could be sorted by the percentage of students in the school who were determined to be "Proficient or Distinguished" on the mathematics portion of the test. Once each of the schools with coaches was grouped with schools of a similar size and mathematics achievement, individual school report cards were consulted to ensure that the matched schools were similar in terms of urban vs. rural setting, the percentage of low income students (as measured by the percentage of students eligible for free or reduced lunch). If a possible match school was found to be in the same district as a school with a coach, then that school was selected as the match for the participating school as it was likely that the schools would have similar policies, textbooks, etc.

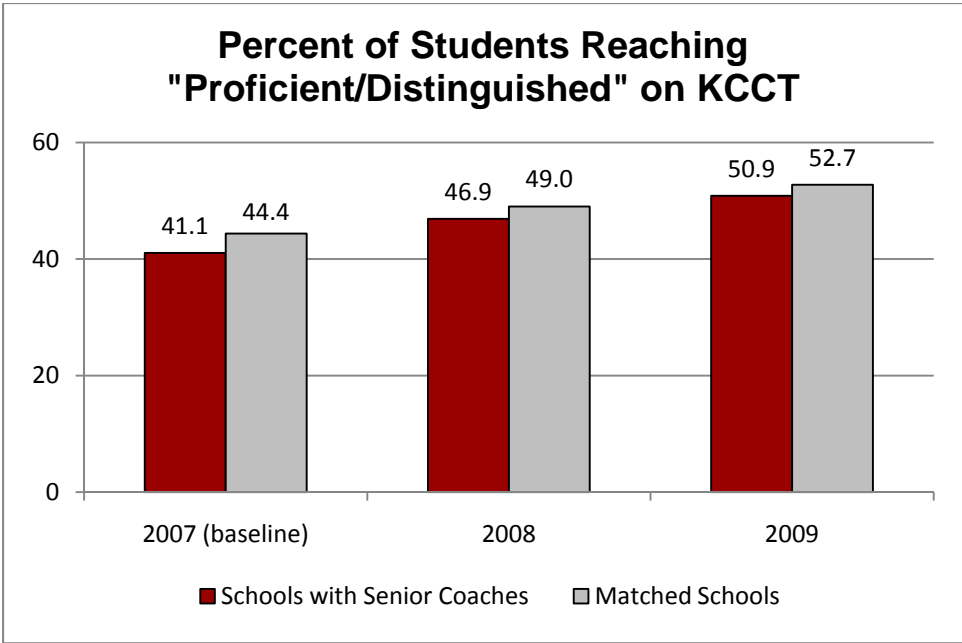
Once the list of schools with coaches and the matched schools were compiled for senior and alumni coaches, longitudinal KCCT data were gathered. Included in the graphs below are data from the year prior to entering the coaching program (2006) to the most recent available data (2009). As you can see from Graph 1, there has been steady growth in the percentage of students who are achieving proficiency in mathematics in both the schools with coaches as well as their matched comparison school. When considering the year prior to the implementation of the coaching program (2006), there has been substantial growth in the percentage of students reaching proficiency on the mathematics portion of the KCCT.

Graph 1.



Graph two presents similar data. Although there was slightly less growth in the percentage of students from schools with coaches who reached the level of “proficient or distinguished”, there was a steady increase across both groups. It should be noted that in both the alumni and the senior coaching schools, a majority of the students were achieving at a level of Proficient or Distinguished on the KCCT for the first time.

Graph 2.



Concluding Comments

The use of recorded coaching conversations seemed to be an effective tool for monitoring the fidelity of the Cognitive CoachingSM model. In addition, the process of completing the video observation form and coaching conversation transcripts allowed coaches to objectively reflect on their performance and simultaneously reinforce the skills and techniques they were taught in the Cognitive CoachingSM Foundations course. Although it is not possible to quantify the impact of this self reflection process on coaches' fidelity to the model, given the nature of these procedures it seems reasonable to infer that the process of monitoring and evaluating their performance helped improve the fidelity of the Cognitive CoachingSM model.

In addition to the reinforcement built into the process of coaches recording and evaluating their conversations, also having them reviewed by an external assessor helped ensure coaches were reliable in their self assessment and were held accountable for completing and submitting conversations during the school year.

While the fidelity of the Cognitive CoachingSM was straightforward and easy to assess, the extent to which teachers' classroom practices changed over time was less apparent due to the limited number of respondents who completed the SEC at the end of the year. For this reason, a comparison of instructional strategies between cohorts at the beginning of the year was the only comparison that could be made with these data. The results indicate both cohorts of coachees spend similar proportions of their instructional time using the same strategies and both coaches and coachees use many different instructional strategies in their classroom.

If needing to quantify a change in instructional practices in future programs, it might be useful to add an incentive for participants to complete the second round of data collection, increase the monitoring of the response rate while the second round of data collection was occurring, or ideally combine both strategies to maximize the response rate. Additionally since it can be difficult to see measurable change in a relatively short amount of time, a more longitudinal design might be able to capture significant change in classroom practices.

This project had the additional burden of ending at the conclusion of the school year. This awareness undoubtedly impacted the motivation of participants to complete the survey at the end of the school year. Given this, it is unlikely that without some incentive for completing the survey at time two, this response rate would be low.

Although participating schools were matched with non-participating schools, the potential impact of coaching on student achievement is diluted. Since it was not possible to look at classroom level data, and it is likely that there were mathematics teachers in the school who had limited or no contact with the school's coach it would be best to look at change in student achievement at the classroom level. Depending on the structure of the school, it might even be possible to track achievement of students in

the same school based on whether or not they were taught by a teacher who received coaching rather than having to select a matched school with similar achievement and demographic characteristics.

Although the results of the coaching program on teacher practices and student achievement is still uncertain, the results presented in this report indicate that coaches were successful at translating their training in the Cognitive CoachingSM process into coaching conversations with teachers at their school. These conversations were thought provoking for the teachers (as indicated by their statements in the taped conversations) and were of high quality and fidelity to the Cognitive CoachingSM model.

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Appendix A

Homework

How often do you usually assign mathematics homework to be completed outside of class?

Q 14	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	12% (16)	11% (7)	14% (3)	20% (1)
Less than once per week	40% (54)	27% (17)	50% (11)	0% (0)
Once or twice per week	44% (60)	51% (32)	27% (6)	80% (4)
Three to four times per week	3% (4)	11% (7)	9% (2)	0% (0)
Every day	1% (1)	0% (0)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (22)	100% (5)

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	25% (5)	0% (0)	0% (0)	0% (0)
Less than once per week	20% (4)	33% (3)	0% (0)	0% (0)
Once or twice per week	50% (10)	56% (5)	83% (5)	0% (0)
Three to four times per week	5% (1)	11% (1)	17% (1)	100% (1)
Every day	0% (0)	0% (0)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

How many minutes do you expect a typical student to spend on a normal homework assignment completed outside of class?

Q 15	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
I do not assign homework	10% (14)	10% (6)	14% (3)	20% (1)
Less than 15 minutes	12% (16)	14% (9)	14% (3)	0% (0)
15 to 30 minutes	29% (39)	27% (17)	41% (9)	20% (1)
31 to 60 minutes	43% (58)	43% (27)	32% (7)	60% (3)
61 to 90 minutes	6% (8)	6% (4)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (22)	100% (5)

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
I do not assign homework	20% (4)	0% (0)	0% (0)	0% (0)
Less than 15 minutes	20% (4)	11% (1)	17% (1)	0% (0)
15 to 30 minutes	25% (5)	56% (5)	17% (1)	0% (0)
31 to 60 minutes	35% (7)	22% (2)	67% (4)	100% (1)
61 to 90 minutes	0% (0)	11% (1)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

Does homework completed outside of class count toward student grades?

Q 16	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	40% (54)	25% (16)	50% (11)	20% (1)
Usually does not	15% (20)	13% (8)	5% (1)	0% (0)
Usually does	27% (37)	38% (24)	27% (6)	40% (2)
Never	18% (24)	24% (15)	18% (4)	40% (2)
Total	100% (135)	100% (63)	100% (22)	100% (5)

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	25% (5)	11% (1)	0% (0)	0% (0)
Usually does not	15% (3)	11% (1)	17% (1)	0% (0)
Usually does	35% (7)	67% (6)	67% (4)	100% (1)
Never	25% (5)	11% (1)	17% (1)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

How often do you assign homework to be completed in a small group outside of class?

Q 17	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	80% (108)	81% (51)	86% (19)	60% (3)
Less than once per week	11% (15)	10% (6)	9% (2)	40% (2)
Once or twice per week	6% (8)	10% (6)	5% (1)	0% (0)
Three to four times per week	2% (3)	0% (0)	0% (0)	0% (0)
Every day	1% (1)	0% (0)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (22)	100% (5)

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	75% (15)	67% (6)	50% (3)	100% (1)
Less than once per week	15% (3)	11% (1)	33% (2)	0% (0)
Once or twice per week	10% (2)	22% (2)	17% (1)	0% (0)
Three to four times per week	0% (0)	0% (0)	0% (0)	0% (0)
Every day	0% (0)	0% (0)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

What percentage of the time that students in the target class spend on mathematics homework done outside of class do you expect them to:

	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
18. Complete exercises from a book or worksheet	32.74%	29.18%	23.91%	28.82%
19. Solve word problems from a book or worksheet	20.59%	24.17%	17.09%	20.70%
20. Explain their reasoning in written form	13.57%	13.65%	22.01%	18.36%
21. Work on a demo or proof of math work	13.71%	12.84%	11.74%	12.96%
22. Collect data	11.43%	9.93%	15.36%	7.96%
23. Work on an assignment/ project >a wk	2.70%	3.46%	2.03%	4.91%
24. Solve novel or non routine math problems	5.26%	6.77%	7.87%	6.29%

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
18. Complete exercises from a book or worksheet	29.99%	23.18%	34.75%	20.83%
19. Solve word problems from a book or worksheet	21.79%	16.70%	25.45%	20.83%
20. Explain their reasoning in written form	18.62%	18.25%	17.64%	20.83%
21. Work on a demo or proof of math work	13.34%	10.12%	8.29%	8.33%
22. Collect data	4.71%	8.43%	7.30%	4.17%
23. Work on an assignment/ project >a wk	3.78%	6.81%	2.50%	4.17%
24. Solve novel or non routine math problems	7.77%	16.50%	4.06%	20.83%

Instructional Activities in Mathematics

When students in the target class work individually on mathematics exercises, problems, investigations, or tasks, how much of that time do they:

	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
37. Solve word problems from a text or worksheet	1.56%	1.73%	1.91%	2.16%
38. Solve non-routine math problems	1.10%	1.20%	1.40%	0.79%
39. Explain their reasoning orally or in written form	1.71%	1.23%	1.44%	1.06%
40. Apply math concepts to "real world" problems	2.53%	2.21%	3.77%	1.15%
41. Make estimates, predictions or hypotheses	1.87%	1.30%	2.84%	0.98%
42. Analyze data to make inferences or predictions	1.63%	1.16%	2.96%	0.98%
43. Work on a problem that takes >45 mins	0.14%	0.27%	0.04%	0.30%
44. Complete proofs or demonstrate reasoning	0.48%	0.68%	0.07%	0.53%

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
37. Solve word problems from a text or worksheet	0.72%	1.69%	1.63%	1.30%
38. Solve non-routine math problems	0.57%	0.53%	0.58%	0.26%
39. Explain their reasoning orally or in written form	0.70%	1.02%	1.38%	0.52%
40. Apply math concepts to "real world" problems	0.95%	1.91%	1.24%	0.52%
41. Make estimates, predictions or hypotheses	0.53%	1.29%	1.07%	0.52%
42. Analyze data to make inferences or predictions	0.44%	1.42%	1.33%	0.52%
43. Work on a problem that takes >45 mins	0.13%	0.20%	0.03%	0.52%
44. Complete proofs or demonstrate reasoning	0.19%	0.37%	0.03%	0.00%

When students in the target class work in pairs or small groups on mathematics exercises, problems, investigations, or tasks, how much of that time do they:

	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
45. Solve word problems from a text or worksheet	0.51%	0.54%	0.42%	0.97%
46. Solve non-routine math problems	0.29%	0.43%	0.25%	0.49%
47. Explain their reasoning orally or in written form	0.32%	0.49%	0.24%	0.55%
48. Apply math concepts to "real world" problems	0.52%	0.72%	0.41%	1.03%
49. Make estimates, predictions or hypotheses	0.27%	0.36%	0.26%	0.49%
50. Analyze data to make inferences or predictions	0.26%	0.35%	0.08%	0.49%
51. Work on a problem that takes >45 mins	0.11%	0.21%	0.06%	0.49%
52. Complete proofs or demonstrate reasoning	0.13%	0.27%	0.21%	0.42%

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
45. Solve word problems from a text or worksheet	0.63%	1.58%	0.44%	0.64%
46. Solve non-routine math problems	0.66%	0.59%	0.05%	0.64%
47. Explain their reasoning orally or in written form	0.30%	1.60%	0.30%	0.64%
48. Apply math concepts to "real world" problems	0.56%	0.50%	0.52%	0.64%
49. Make estimates, predictions or hypotheses	0.44%	0.74%	0.52%	0.64%
50. Analyze data to make inferences or predictions	0.31%	0.76%	0.44%	0.64%
51. Work on a problem that takes >45 mins	0.48%	0.18%	0.03%	0.32%
52. Complete proofs or demonstrate reasoning	0.16%	0.46%	0.03%	0.00%

When students in the target class use hands-on materials, how much of that time do they:

	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
53 Work w/manipulatives	5.28%	3.57%	2.85%	4.43%
54. Measure objects using tools (rulers, etc.)	2.05%	2.21%	2.02%	2.34%
55. Build models or charts	1.81%	2.48%	1.57%	2.22%
56. Collect data by counting, observing, etc.	1.90%	1.91%	1.22%	1.27%
57. Present info to others using manipulatives	2.37%	2.67%	4.09%	2.70%

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
53 Work w/manipulatives	3.07%	2.04%	2.74%	2.78%
54. Measure objects using tools (rulers, etc.)	2.23%	0.96%	1.95%	2.78%
55. Build models or charts	2.33%	2.39%	0.49%	1.11%
56. Collect data by counting, observing, etc.	2.02%	1.39%	1.55%	0.56%
57. Present info to others using manipulatives	2.67%	3.33%	1.55%	1.11%

When students in the target class are engaged in activities that involve the use of calculators, computers, or other educational technology as part of mathematics instruction, how much of that time do they:

	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
	Mean	Mean	Mean	Mean
58. Learn facts	3.44%	2.74%	3.44%	3.10%
59. Practice procedures	5.48%	4.20%	4.25%	3.34%
60. Use sensors and probes	0.78%	0.78%	0.40%	0.29%
61. Retrieve or exchange data or information	0.86%	0.85%	0.74%	0.17%
62. Display and analyze data	1.60%	2.15%	1.26%	0.69%
63. Develop geometric concepts (e.g. using simulations)	0.88%	0.89%	0.72%	0.69%

	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
	Mean	Mean	Mean	Mean
58. Learn facts	2.63%	2.77%	3.15%	1.86%
59. Practice procedures	4.60%	3.99%	7.92%	1.86%
60. Use sensors and probes	0.55%	0.15%	0.05%	0.47%
61. Retrieve or exchange data or information	0.94%	0.24%	0.93%	0.47%
62. Display and analyze data	0.96%	1.58%	0.71%	0.23%
63. Develop geometric concepts (e.g. using simulations)	0.83%	0.13%	0.96%	0.23%

Assessments

How often you use each of the following strategies when assessing students in the target mathematics class?

64.Objective items (multiple choice, T/F)	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	14% (19)	8% (5)	22% (5)	20% (1)
1 -4 times per year	15% (20)	11% (7)	9% (2)	0% (0)
1 - 3 times per month	47% (64)	41% (26)	52% (12)	80% (4)
1 - 3 times per week	21% (29)	33% (21)	17% (4)	0% (0)
4 - 5 times per week	2% (3)	6% (4)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (23)	100% (5)

64.Objective items (multiple choice, T/F)	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	15% (3)	0% (0)	0% (0)	0% (0)
1 -4 times per year	10% (2)	11% (1)	0% (0)	0% (0)
1 - 3 times per month	35% (7)	56% (5)	67% (4)	100% (1)
1 - 3 times per week	30% (6)	22% (2)	17% (1)	0% (0)
4 - 5 times per week	10% (2)	11% (1)	17% (1)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

65. Short answer questions	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	13% (17)	6% (4)	13% (3)	20% (1)
1 -4 times per year	13% (18)	5% (3)	17% (4)	0% (0)
1 - 3 times per month	33% (44)	40% (25)	35% (8)	40% (2)
1 - 3 times per week	32% (43)	37% (23)	17% (4)	40% (2)
4 - 5 times per week	10% (13)	13% (8)	17% (4)	0% (0)
Total	100% (135)	100% (63)	100% (23)	100% (5)

65. Short answer questions	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	5% (1)	0% (0)	0% (0)	0% (0)
1 -4 times per year	20% (4)	0% (0)	0% (0)	0% (0)
1 - 3 times per month	25% (5)	33% (3)	50% (3)	100% (1)
1 - 3 times per week	35% (7)	56% (5)	33% (2)	0% (0)
4 - 5 times per week	15% (3)	11% (1)	17% (1)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

66. Extended response item	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	19% (26)	13% (8)	35% (8)	20% (1)
1 -4 times per year	18% (24)	14% (9)	13% (3)	0% (0)
1 - 3 times per month	42% (57)	35% (22)	35% (8)	60% (3)
1 - 3 times per week	19% (26)	27% (17)	17% (4)	20% (1)
4 - 5 times per week	1% (2)	11% (7)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (23)	100% (5)

66. Extended response item	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	20% (4)	0% (0)	0% (0)	0% (0)
1 -4 times per year	5% (1)	0% (0)	17% (1)	0% (0)
1 - 3 times per month	45% (9)	44% (4)	50% (3)	100% (1)
1 - 3 times per week	25% (5)	44% (4)	33% (2)	0% (0)
4 - 5 times per week	5% (1)	11% (1)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

67. Performance tasks or events	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	11% (15)	8% (5)	9% (2)	20% (1)
1 -4 times per year	18% (24)	16% (10)	26% (6)	60% (3)
1 - 3 times per month	29% (39)	19% (12)	35% (8)	0% (0)
1 - 3 times per week	28% (38)	37% (23)	17% (4)	0% (0)
4 - 5 times per week	14% (19)	21% (13)	13% (3)	20% (1)
Total	100% (135)	100% (63)	100% (23)	100% (5)

67. Performance tasks or events	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	15% (3)	0% (0)	0% (0)	0% (0)
1 -4 times per year	15% (3)	0% (0)	50% (3)	100% (1)
1 - 3 times per month	40% (8)	22% (2)	33% (2)	0% (0)
1 - 3 times per week	25% (5)	78% (7)	17% (1)	0% (0)
4 - 5 times per week	5% (1)	0% (0)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

68. Individual or group demo or presentation	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	25% (34)	21% (13)	13% (3)	40% (2)
1 -4 times per year	32% (43)	16% (10)	39% (9)	40% (2)
1 - 3 times per month	25% (34)	37% (23)	22% (5)	0% (0)
1 - 3 times per week	14% (19)	21% (13)	17% (4)	0% (0)
4 - 5 times per week	4% (5)	6% (4)	9% (2)	20% (1)
Total	100% (135)	100% (63)	100% (23)	100% (5)

68. Individual or group demo or presentation	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	15% (3)	0% (0)	17% (1)	0% (0)
1 -4 times per year	30% (6)	11% (1)	33% (2)	100% (1)
1 - 3 times per month	30% (6)	67% (6)	33% (2)	0% (0)
1 - 3 times per week	25% (5)	22% (2)	17% (1)	0% (0)
4 - 5 times per week	0% (0)	0% (0)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

69. Mathematics projects	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	39% (52)	35% (22)	39% (9)	40% (2)
1 -4 times per year	44% (60)	33% (21)	52% (12)	60% (3)
1 - 3 times per month	16% (21)	21% (13)	9% (2)	0% (0)
1 - 3 times per week	1% (2)	8% (5)	0% (0)	0% (0)
4 - 5 times per week	0% (0)	3% (2)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (23)	100% (5)

69. Mathematics projects	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	20% (4)	0% (0)	0% (0)	0% (0)
1 -4 times per year	50% (10)	67% (6)	100% (6)	100% (1)
1 - 3 times per month	25% (5)	22% (2)	0% (0)	0% (0)
1 - 3 times per week	5% (1)	11% (1)	0% (0)	0% (0)
4 - 5 times per week	0% (0)	0% (0)	0% (0)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

70. Portfolios	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	71% (96)	59% (37)	78% (18)	40% (2)
1 -4 times per year	21% (28)	25% (16)	17% (4)	60% (3)
1 - 3 times per month	8% (11)	11% (7)	0% (0)	0% (0)
1 - 3 times per week	0% (0)	3% (2)	4% (1)	0% (0)
4 - 5 times per week	0% (0)	2% (1)	0% (0)	0% (0)
Total	100% (135)	100% (63)	100% (23)	100% (5)

70. Portfolios	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	65% (13)	44% (4)	67% (4)	100% (1)
1 -4 times per year	25% (5)	44% (4)	17% (1)	0% (0)
1 - 3 times per month	0% (0)	11% (1)	0% (0)	0% (0)
1 - 3 times per week	5% (1)	0% (0)	0% (0)	0% (0)
4 - 5 times per week	5% (1)	0% (0)	17% (1)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

71. Systematic observation of students	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Never	14% (19)	14% (9)	26% (6)	40% (2)
1 -4 times per year	20% (27)	5% (3)	22% (5)	0% (0)
1 - 3 times per month	10% (13)	24% (15)	17% (4)	0% (0)
1 - 3 times per week	24% (33)	19% (12)	4% (1)	0% (0)
4 - 5 times per week	32% (43)	38% (24)	30% (7)	60% (3)
Total	100% (135)	100% (63)	100% (23)	100% (5)

71. Systematic observation of students	Fall of 2009		Spring 2010	
	Freshman Coach	Senior Coach	Freshman Coach	Senior Coach
Never	25% (5)	0% (0)	17% (1)	0% (0)
1 -4 times per year	15% (3)	44% (4)	33% (2)	0% (0)
1 - 3 times per month	0% (0)	0% (0)	17% (1)	100% (1)
1 - 3 times per week	25% (5)	44% (4)	17% (1)	0% (0)
4 - 5 times per week	35% (7)	11% (1)	17% (1)	0% (0)
Total	100% (20)	100% (9)	100% (6)	100% (1)

Instructional Influences

To what degree do the following influence what you teach in the target mathematics class?

72. State curriculum framework or standards	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	0% (0)	3% (2)	0% (0)	20% (1)
Strong Negative Influence	0% (0)	2% (1)	9% (2)	0% (0)
Somewhat negative influence	1% (1)	3% (2)	4% (1)	0% (0)
Little or No Influence	7% (9)	0% (0)	0% (0)	20% (1)
Somewhat Positive Influence	23% (31)	21% (13)	35% (8)	0% (0)
Strong Positive Influence	69% (93)	71% (44)	52% (12)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

73. District curriculum framework or standards/guidelines	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	1% (2)	5% (3)	0% (0)	20% (1)
Strong Negative Influence	0% (0)	2% (1)	4% (1)	0% (0)
Somewhat negative influence	1% (2)	2% (1)	4% (1)	0% (0)
Little or No Influence	5% (7)	3% (2)	0% (0)	40% (2)
Somewhat Positive Influence	25% (33)	16% (10)	30% (7)	0% (0)
Strong Positive Influence	67% (90)	73% (45)	61% (14)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (5)

74. Textbooks, instructional materials	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	4% (5)	5% (3)	0% (0)	20% (1)
Strong Negative Influence	1% (2)	0% (0)	4% (1)	0% (0)
Somewhat negative influence	2% (3)	5% (3)	0% (0)	0% (0)
Little or No Influence	16% (21)	23% (14)	17% (4)	20% (1)
Somewhat Positive Influence	40% (54)	50% (31)	52% (12)	40% (2)
Strong Positive Influence	37% (49)	18% (11)	26% (96)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

75. State tests or results from tests	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	7% (9)	5% (3)	22% (5)	20% (1)
Strong Negative Influence	1% (2)	3% (2)	17% (4)	20% (1)
Somewhat negative influence	7% (10)	3% (2)	4% (1)	0% (0)
Little or No Influence	12% (16)	3% (2)	0% (0)	0% (0)
Somewhat Positive Influence	37% (49)	24% (15)	35% (8)	0% (0)
Strong Positive Influence	36% (48)	61% (38)	22% (5)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

76. District tests or results from tests	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	19% (25)	10% (6)	26% (6)	40% (2)
Strong Negative Influence	1% (2)	2% (1)	9% (2)	0% (0)
Somewhat negative influence	2% (3)	5% (3)	9% (2)	20% (1)
Little or No Influence	18% (24)	18% (11)	0% (0)	20% (1)
Somewhat Positive Influence	33% (44)	19% (12)	35% (8)	0% (0)
Strong Positive Influence	27% (36)	47% (29)	22% (5)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

77. National math education standards	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	8% (11)	6% (4)	4% (1)	20% (1)
Strong Negative Influence	0% (0)	2% (1)	4% (1)	0% (0)
Somewhat negative influence	2% (3)	0% (0)	4% (1)	0% (0)
Little or No Influence	22% (30)	15% (9)	13% (3)	20% (1)
Somewhat Positive Influence	38% (51)	37% (23)	39% (9)	20% (1)
Strong Positive Influence	29% (39)	40% (25)	35% (8)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (5)

78. Your pre-service preparation	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	14% (19)	10% (6)	4% (1)	20% (1)
Strong Negative Influence	0% (0)	0% (0)	0% (0)	20% (1)
Somewhat negative influence	3% (4)	3% (2)	0% (0)	0% (0)
Little or No Influence	21% (28)	21% (13)	22% (5)	0% (0)
Somewhat Positive Influence	44% (59)	37% (23)	35% (8)	20% (1)
Strong Positive Influence	18% (24)	29% (18)	39% (9)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (50)

79. Students' special needs	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	3% (4)	3% (2)	4% (1)	20% (1)
Strong Negative Influence	0% (0)	2% (1)	0% (0)	0% (0)
Somewhat negative influence	1% (1)	2% (1)	0% (0)	0% (0)
Little or No Influence	11% (15)	15% (9)	9% (2)	0% (0)
Somewhat Positive Influence	41% (55)	26% (16)	43% (10)	60% (3)
Strong Positive Influence	44% (59)	53% (33)	43% (10)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

80. Parental or community preferences	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	4% (6)	5% (3)	13% (3)	20% (1)
Strong Negative Influence	1% (2)	2% (1)	9% (2)	0% (0)
Somewhat negative influence	2% (3)	5% (3)	0% (0)	0% (0)
Little or No Influence	38% (51)	35% (22)	39% (9)	60% (3)
Somewhat Positive Influence	42% (56)	29% (18)	26% (6)	0% (0)
Strong Positive Influence	12% (16)	24% (15)	13% (3)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

81. Preparation of students for the next grade or level	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
N/A	0% (0)	3% (2)	0% (0)	20%
Strong Negative Influence	1% (1)	2% (1)	4% (1)	0% (0)
Somewhat negative influence	0% (0)	0% (0)	0% (0)	0% (0)
Little or No Influence	6% (8)	6% (4)	4% (1)	0% (0)
Somewhat Positive Influence	38% (51)	26% (16)	26% (6)	20% (1)
Strong Positive Influence	55% (74)	63% (39)	65% (15)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

Classroom Instructional Readiness

How well prepared are you to:

82. Teach math at your assigned level	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	4% (5)	5% (3)	0% (0)	0% (0)
Somewhat prepared	9% (12)	3% (2)	4% (1)	0% (0)
Well prepared	37% (49)	29% (18)	57% (13)	0% (0)
Very well prepared	51% (68)	63% (39)	39% (9)	100% (5)
Total	100% (134)	100% (62)	100% (23)	100% (5)

83. Integrate math with other subjects	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	6% (8)	8% (5)	4% (1)	0% (0)
Somewhat prepared	31% (41)	16% (10)	26% (6)	20% (1)
Well prepared	44% (59)	45% (28)	52% (12)	0% (0)
Very well prepared	19% (26)	31% (19)	17% (4)	80% (4)
Total	100% (134)	100% (62)	100% (23)	100% (5)

84. Provide math instruction that meets content standards	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	4% (5)	3% (2)	0% (0)	0% (0)
Somewhat prepared	12% (16)	8% (5)	9% (2)	0% (0)
Well prepared	40% (53)	34% (21)	61% (14)	0% (0)
Very well prepared	45% (60)	55% (34)	30% (7)	100% (5)
Total	100% (134)	100% (62)	100% (23)	100% (5)

85. Use a variety of assessment strategies	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	4% (6)	5% (3)	0% (0)	0% (0)
Somewhat prepared	19% (25)	16% (10)	22% (5)	0% (0)
Well prepared	49% (65)	44% (27)	57% (13)	20% (1)
Very well prepared	28% (38)	35% (22)	22% (5)	80% (4)
Total	100% (134)	100% (62)	100% (23)	100% (5)

86. Teach problem solving strategies	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	3% (4)	2% (1)	4% (1)	0% (0)
Somewhat prepared	16% (22)	16% (10)	4% (1)	0% (0)
Well prepared	46% (61)	48% (30)	61% (14)	20% (1)
Very well prepared	35% (47)	34% (21)	30% (7)	80% (4)
Total	100% (134)	100% (62)	100% (23)	100% (5)

87. Teach math w/manupulatives	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	4% (6)	8% (5)	0% (0)	20% (1)
Somewhat prepared	13% (17)	18% (11)	9% (2)	20% (1)
Well prepared	37% (50)	31% (19)	65% (15)	0% (0)
Very well prepared	46% (61)	44% (27)	26% (6)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

88. Teach students w/ physical disabilities	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	13% (18)	26% (16)	13% (3)	20% (1)
Somewhat prepared	38% (51)	26% (16)	26% (6)	0% (0)
Well prepared	33% (44)	27% (17)	48% (11)	0% (0)
Very well prepared	16% (21)	21% (13)	13% (3)	80% (4)
Total	100% (134)	100% (62)	100% (23)	100% (5)

89. Teach students w/diverse abilities	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	6% (8)	8% (5)	4% (1)	20% (1)
Somewhat prepared	27% (36)	27% (17)	17% (4)	0% (0)
Well prepared	44% (59)	42% (26)	61% (14)	20% (1)
Very well prepared	23% (31)	23% (14)	17% (4)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

90. Teach math to students from a variety of cultural backgrounds	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	13% (17)	16% (10)	13% (3)	20% (1)
Somewhat prepared	37% (49)	27% (17)	17% (4)	20% (1)
Well prepared	35% (47)	37% (23)	48% (11)	0% (0)
Very well prepared	16% (21)	19% (12)	22% (5)	60% (3)
Total	100% (134)	100% (62)	100% (23)	100% (5)

91. Teach math to students with limited English proficiency	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Not well prepared	34% (46)	40% (25)	39% (9)	20% (1)
Somewhat prepared	42% (56)	42% (26)	26% (6)	40% (2)
Well prepared	16% (22)	11% (7)	26% (6)	20% (1)
Very well prepared	7% (10)	6% (4)	9% (2)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

Teacher Opinions and Beliefs

What is your opinion about each of the statements below?

92. Students learn math best with they ask a lot of questions	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	1% (1)	0% (0)	4% (1)	0% (0)
Disagree	1% (2)	3% (2)	4% (1)	0% (0)
Neutral/Undecided	17% (23)	5% (3)	13% (3)	20% (1)
Agree	51% (68)	60% (37)	52% (12)	40% (2)
Strongly Agree	30% (40)	32% (20)	26% (6)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (5)

93. It's important for students to learn basic math before solving probs	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	2% (3)	2% (1)	0% (0)	0% (0)
Disagree	13% (18)	15% (9)	9% (2)	0% (0)
Neutral/Undecided	17% (23)	18% (11)	26% (6)	20% (1)
Agree	48% (64)	42% (26)	30% (7)	40% (2)
Strongly Agree	19% (26)	24% (15)	35% (8)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (5)

94. I am supported by my colleagues to try out new teaching ideas	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	1% (1)	0% (0)	0% (0)	0% (0)
Disagree	2% (3)	3% (2)	0% (0)	0% (0)
Neutral/Undecided	10% (14)	5% (3)	13% (3)	40% (2)
Agree	49% (66)	48% (30)	52% (12)	20% (1)
Strongly Agree	37% (50)	44% (27)	35% (8)	40% (2)
Total	100% (134)	100% (62)	100% (23)	100% (5)

95. I'm required to follow rules that conflict w/my professional judgment	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	12% (16)	24% (15)	4% (1)	20% (1)
Disagree	42% (56)	39% (24)	30% (7)	40% (2)
Neutral/Undecided	25% (33)	13% (8)	39% (9)	0% (0)
Agree	16% (21)	16% (10)	26% (6)	20% (1)
Strongly Agree	6% (8)	8% (5)	0 (0%)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

96. Math teachers regularly observe each other teaching	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	18% (24)	13% (8)	9% (2)	0% (0)
Disagree	48% (64)	39% (24)	57% (13)	80% (4)
Neutral/Undecided	22% (29)	23% (14)	22% (5)	20% (1)
Agree	10% (14)	24% (15)	13% (3)	0% (0)
Strongly Agree	2% (3)	2% (1)	0% (0)	0% (0)
Total	100% (134)	100% (62)	100% (23)	100% (5)

97. Math teachers in this school trust each other	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	1% (2)	0% (0)	0% (0)	0% (0)
Disagree	4% (5)	11% (7)	4% (1)	20% (1)
Neutral/Undecided	16% (21)	5% (3)	13% (3)	40% (2)
Agree	56% (75)	47% (29)	48% (11)	20% (1)
Strongly Agree	23% (31)	37% (23)	35% (8)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

98. It's ok to discuss feelings, worries etc. w/other math teachers	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	1% (1)	0% (0)	0% (0)	0% (0)
Disagree	5% (7)	8% (5)	17% (4)	40% (2)
Neutral/Undecided	13% (17)	3% (2)	17% (4)	0% (0)
Agree	53% (71)	45% (28)	52% (12)	60% (3)
Strongly Agree	28% (38)	44% (27)	13% (3)	0% (0)
Total	100% (134)	100% (62)	100% (23)	100% (5)

99. Math teachers respect others who take the lead in improvement efforts	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	0% (0)	0% (0)	0% (0)	0% (0)
Disagree	6% (8)	5% (3)	4% (1)	20% (1)
Neutral/Undecided	16% (22)	15% (9)	30% (7)	40% (2)
Agree	54% (73)	44% (27)	52% (12)	40% (2)
Strongly Agree	23% (31)	37% (23)	13% (3)	0% (0)
Total	100% (134)	100% (62)	100% (23)	100% (5)

100. It's ok to discuss feelings, worries etc. w/leadership staff	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	6% (8)	2% (1)	13% (3)	0% (0)
Disagree	11% (15)	15% (9)	22% (5)	20% (1)
Neutral/Undecided	22% (30)	10% (6)	30% (7)	20% (1)
Agree	45% (60)	44% (27)	30% (7)	40% (2)
Strongly Agree	16% (21)	31% (19)	4% (1)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

101. The leadership takes interest in the PD of staff	Fall of 2009		Spring 2010	
	Freshman Coachee	Senior Coachee	Freshman Coachee	Senior Coachee
Strongly Disagree	1% (1)	0% (0)	4% (1)	0% (0)
Disagree	5% (7)	5% (3)	13% (3)	0% (0)
Neutral/Undecided	16% (21)	11% (7)	26% (6)	0% (0)
Agree	51% (68)	39% (24)	35% (8)	80% (4)
Strongly Agree	28% (37)	45% (28)	22% (5)	20% (1)
Total	100% (134)	100% (62)	100% (23)	100% (5)

