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K-12 QUALIFYING DOCTORAL EXAMINATION

ELMP K—12 DOCTORAL PROGRAM

EXAM DATE: MAY 19-20, 2011

Directions

Attached please find the Qualifying Exam. There are five (5) sections as outlined below.

• Before you begin, create a header for each page with your student ID number (found on the label of this envelope), the name of the exam you are taking [Qual K12] and today's date.

• You will answer one question in each of the Sections I - IV and all questions in Section V.

• When you complete a section, insert a page break before starting the next section.

• Please indicate on each question answered, the number and title of that question. (i.e. Question 2 – Policy, etc.)

In developing your responses, be sure to organize them in a logically coherent way and to make optimal use of relevant current research and literature applicable to each question.

I. CURRICULUM (Answer one)

II. PUBLIC POLICY PERSPECTIVES (Choose one of nine)

III. ORGANIZATION (Answer one)

IV. RESEARCH (Choose one of six)

V. STATISTICS (Answer ALL questions)

YOU MUST SUBSTANTIALLY ANSWER ALL QUESTIONS AS INDICATED IN THESE EXAM INSTRUCTIONS.

**** FAILURE TO DO SO WILL CONSTITUTE A FAILURE OF THE ENTIRE EXAM ****
K-12 QUALIFYING DOCTORAL EXAM

May 19-20, 2011

I. CURRICULUM

CURRICULUM EXAM QUESTION

You are asked to prepare a critique of the following Educational Leadership professional journal article, “Reform: To What End?” In so doing, be certain to include in your discussion the relationship of this article to current literature and related research on this topic. It is also important to employ the higher order thinking skills of analysis, synthesis and evaluation in writing your critique.
Reform: To What End?
Mike Rose

We need a different orientation to school reform—one that embodies a richer understanding of teaching and learning.

This is an exciting time for education as the federal government, state houses, and private philanthropies are all focusing on school reform. A lot of good ideas are in the air—thoughtful proposals for ways to change things, to imagine a new kind of schooling in the United States.

The history of school reform has taught us, however, that good ideas can become one-dimensionalized as they move from conception through policy formation to implementation. Also, in the heat of reform, politics and polemics can become an end in themselves, a runaway train of reform for reform’s sake. In addition, reforms can have unintended consequences. As a reform plays out in the complex, on-the-ground world of districts, school boards, and classrooms, it can lead to counter productive practices. In the case of No Child Left Behind, for example, we saw the narrowing of the curriculum to prepare for high-stakes tests in math and language arts.

At this moment, when we’re focusing so much attention on school reform and so much is possible, it would be good to step back and remind ourselves what we’re ultimately trying to achieve. What is the goal of school reform? Most would agree it’s to create rich learning environments, ones with greater scope and more equitable distribution than those we currently have.

As we reimagine school, some basic questions should serve as our touchstone for reform: What is the purpose of education in a democracy? What kind of people do we want to see emerge from U.S. schools? What is the experience of education when we do it well?

Happy as a Crab

One example of good teaching I saw comes from my book Possible Lives: The Promise of Public Education in America (Penguin, 1996/2006), an account of my travels across the United States to document effective public education. This 1st grade classroom in inner-city Baltimore has 30 students, all from modest to low-income households—the kinds of kids at the center of many school reforms.

As we enter the classroom, teacher Stephanie Terry is reading a book to her students, Eric Carle’s A House for Hermit Crab (Simon and Schuster, 1991). Hermit crabs inhabit empty mollusk shells; as they grow, they leave their old shells to find bigger ones. In this story, a cheery hermit crab is searching for a more spacious home.

There’s a glass case in the classroom with five hermit crabs—which Stephanie supplied—and 13 shells of various sizes. More than once during the year, students have noticed that a shell had been abandoned and that a larger one had suddenly become animated. As Stephanie reads the book, she pauses and raises broader questions about where the creatures live. This leads to an eager query from Kenneth about where in nature you’d find hermit crabs. “Well,” says Stephanie. “Let’s see if we can figure that out.”

She gets up and brings the case with the hermit crabs to the center of the room, takes the crabs out, and places them on the rug. One scuttles away from the group; another moves in a brief half circle; three stay put. While this is going on, Stephanie takes two plastic tubs from the cupboard above the sink and fills one with cold water from the tap and the other with warm water. Then she places both tubs side by side and asks five students, one by one, to put each of the crabs in the cold water. “What happens?” she asks. “They don’t move,” says Kenneth. “They stay inside their shells,” adds Miko.
Stephanie then asks five other students to transfer the crabs to the tub of warm water. They do, and within seconds the crabs start to stir. Before long, the crabs are moving like crazy. "OK," says Stephanie. "What happens in the warmer water?" An excited chorus of students replies, "They're moving! They're walking all over! They like it! They're happy like the crab in the book!" "So what does this suggest about where they like to live?" asks Stephanie.

That night, the students write about the experiment. Many are just learning to write, but Stephanie told them to write down their observations as best as they could, and that she would help them develop what they write. The next day, the students take turns standing in front of the class reading their reports.

Miko goes first. "I saw the hermit crab walking when it was in the warm water, but when it was in the cold water, it was not walking. It likes to live in warm water."

Then Romanise takes the floor, holding his paper way out in his right hand, his left hand in the pocket of his overalls: "(1) I observed two legs in the back of the shell; (2) I observed that some of the crabs change their shell; (3) When the hermit crabs went into the cold water, they walked slow; (4) When the hermit crabs went into the warm water, they walked faster."

One by one, the rest of the students state their observations, halting at times as they try to figure out what they wrote, sometimes losing track and repeating themselves. But in a soft or loud voice, with a quiet sense of assurance or an unsteady eagerness, these first graders report on the behavior of the classroom's hermit crabs, which have now become the focus of their attention.

There's a lot to say about Stephanie's modest but richly stocked classroom and the skillful way she interacts with the children in it. But I'll focus on two important points: what Stephanie demonstrates about the craft and art of teaching and the experience of learning that she generates for her class.

Growing Good Teachers

Everyone in the current reform environment acknowledges the importance of good teaching. But most characterizations of teaching miss the richness and complexity of the work. The teacher often becomes a knowledge-delivery mechanism preparing students for high-stakes tests.

Moreover, reform initiatives lack depth on how to develop more good teachers. There is encouragement of alternative pathways to qualification (and, often, animosity toward schools of education and traditional teacher training). There are calls for merit pay, with pay typically linked to test-score evidence of student achievement. There are general calls for additional professional development. And, of course, there is the widespread negative incentive: By holding teachers' "feet to the fire" of test scores, we will supposedly get more effort from teachers, although proponents of this point of view never articulate the social-psychological mechanisms by which the use of test scores will affect effort, motivation, and pedagogical skill.

But when you watch Stephanie, a very different image of the teacher emerges. She is knowledgeable and resourceful across multiple subject areas and is skillful at integrating them. She is spontaneous, alert for the teachable moment, and able to play out the fruits of that spontaneity and plan next steps incrementally as the activity unfolds. She believes that her students can handle a sophisticated assignment, and she asks questions and gives direction to guide them. Her students seem comfortable taking up the intellectual challenge.

What is interesting is that none of the current high-profile reform ideas would explain or significantly enhance Stephanie's expertise. Merit pay doesn't inspire her inventiveness; it doesn't exist in her district (although she would be happy to have the extra money, given that she furnished some classroom resources from her own pocket). Standardized test scores don't motivate her either. In fact, the typical test would be unable to capture some of the intellectual display I witnessed in her classroom. What motivates her is a complex mix of personal values and a drive for competence. These lead her to treat her students in certain ways and to continue to improve her skill.
A Human Capital Model

Some professional development programs are particularly good at capitalizing on such motivators. Several years earlier, Stephanie participated in a National Science Foundation workshop aimed at integrating science into the elementary school classroom. Teachers met for several weeks during the summer at the Baltimore campus of the University of Maryland, one of several regional training sites around the United States.

The teachers were, in Stephanie's words, "immersed in science"; they were reading, writing, observing presentations, and doing science themselves—all with an eye toward integrating science into their elementary school curriculums. The summer workshop extended through the year, as participating teachers observed one another's classrooms and came together on selected weekends to report on how they were incorporating science into teaching and give presentations themselves. "It gave us a different way," said Stephanie, "to think about science, teaching, and kids."

Because we are in the reimagining mode here, let me offer this: What if we could channel the financial and human resources spent on the vast machinery of high-stakes testing into a robust, widely distributed program of professional development? I don't mean the quick-hit, half-day events that so often pass for professional development, but serious, extended engagement of the kind that the National Science Foundation and the National Writing Project might offer—the sort of program that helped Stephanie conjure her rich lesson with the hermit crabs.

These programs typically take place in the summer (the National Writing Project runs for four weeks), although there are other options, including ones that extend through part of the school year. Teachers work with subject-matter experts; read, write, and think together; learn new material; hear from others who have successfully integrated the material into their classrooms; and try it out themselves.

Electronic media can be hugely helpful here, creating innovative ways for teachers to participate, bringing in people from remote areas, and further enabling all participants to regularly check in as they try new things. Such ongoing participation would be crucial in building on the intellectual community created during this kind of teacher enrichment program. All of this already exists, but we could expand it significantly if policymakers and reformers took into account this richer understanding of the teaching profession.

Although pragmatic lifestyle issues certainly come into play in choosing any profession, the majority of people who enter teaching do so for fairly altruistic reasons. They like working with kids. They like science, literature, or history and want to spark that appreciation in others. They see inequality and want to make a difference in young people's lives.

The kind of professional development I'm describing would appeal to those motives, revitalize them, and further realize them as a teacher's career progresses. Enriched, widely available professional development would substitute a human capital model of school reform for the current test-based technocratic one. And because such professional development would positively affect what teachers teach and how they teach it, it would have a more direct effect on student achievement.

Learning-Friendly Environments

For me, the bottom-line question is whether a particular reform will enable or restrict the kind of thing we see happening in Stephanie Terry's classroom. The hermit crab episode is, of course, drawn from a few days spent in just one classroom, but it represents some qualities I've seen again and again in good schools—K-12, urban or rural, affluent or poor. Let me delineate these qualities, and as you read them, ask yourself to what degree the reforms currently being proposed—from national standards to increased data collection to plans to turn around failing schools—would advance or impede their realization. Just as the representation of teaching is diminished in current education policy, so is the representation of learning. I have yet to see in policy initiatives a depiction of classroom life anywhere close to the one I just shared.
Safety. The classrooms I visited created a sense of safety. There was physical safety, which for children in some locations is a serious consideration. But there was also safety from insult and diminishment. And there was safety to take risks, to push beyond what you can comfortably do at present—"coaxing our thinking along," as one student put it.

Respect. Intimately related to safety is respect, a word I heard frequently during my travels. It means many things and operates on many levels: fair treatment, decency, an absence of intimidation, and beyond the realm of individual civility, a respect for the history, language, and culture of the people represented in the classroom. Respect also has an intellectual dimension. As one principal put it, "It's not just about being polite—even the curriculum has to convey respect. [It] has to be challenging enough that it's respectful."

Student responsibility for learning. Even in classrooms that were run in a relatively traditional manner, students contributed to the flow of events, shaped the direction of discussion, and became authorities on their own experience and on the work they were doing. Think of Stephanie's students observing closely, recording what they saw, forming hypotheses, and reporting publicly on their thinking. These classrooms were places of expectation and responsibility.

Intellectual rigor. Teachers took students seriously as intellectual and social beings. Young people had to work hard, think things through, come to terms with one another—and there were times when such effort took students to their limits. "They looked at us in disbelief," said one New York principal, "when we told them they were intellectuals."

Ongoing support. It is important to note that teachers realized such assumptions through a range of supports, guides, and structures: from the way they organized curriculum and invited and answered questions, to the means of assistance they and their aides provided (tutoring, conferences, written and oral feedback), to the various ways they encouraged peer support and assistance, to the atmosphere they created in the classroom—which takes us back to considerations of safety and respect.

Concern for students' welfare. The students I talked to, from primary-grade children to graduating seniors, had the sense that these classrooms were salutary places—places that felt good to be in and that honored their best interests. They experienced this concern in various ways—as nurturance, social cohesion, the fostering of competence, recognition of growth, and a feeling of opportunity.

The foregoing characteristics made the rooms I visited feel alive. People were learning things, both cognitive and social; they were doing things, individually and collectively—making contributions, connecting ideas, and generating knowledge. To be sure, not everyone was engaged. And everyone, students and teachers, had bad days. But overall, these classrooms were exciting places to be—places of reflection and challenge, of deliberation and expression, of quiet work and public presentation. People were encouraged to be smart.

How directly do current reforms contribute to promoting such qualities?

The Most Important Question
In an important 18th-century essay on education, journalist Samuel Harrison Smith wrote that the free play of intelligence was central to a democracy and that individual intellectual growth was intimately connected to broad-scale intellectual development, to the "general diffusion of knowledge" across the republic.

As we consider what an altered school structure, increased technology, national standards, or other new reform initiatives might achieve, we should also ask the old, defining question, What is the purpose of
education in a democracy? The formation of intellectually safe and respectful spaces, the distribution of authority and responsibility, the maintenance of high expectations and the means to attain them—all this is fundamentally democratic and prepares one for civic life. Teachers should regard students as capable and participatory beings, rich in both individual and social potential. The realization of that vision of the student is what finally should drive school reform in the United States.

Mike Rose is Professor of Social Research Methodology at the UCLA Graduate School of Education and Information Studies, Los Angeles, California. He is author of Why School? Reclaiming Education for All of Us (New Press, 2009).
II. PUBLIC POLICY PERSPECTIVES

You must respond to any one of the questions listed below. There is no requirement to select a particular question based upon your program: K-12 or Higher Education.

PUBLIC POLICY PERSPECTIVES EXAM QUESTIONS

Directions: Select one (1) of the nine (9) questions presented below and respond to it in a coherent essay. Be sure to draw on your knowledge of policy analysis and the literature to frame your basic position, support the position with the best available evidence and to develop your response in clear and coherent prose.

Question #1 Pre-College Outreach Programs

Despite dramatic increases in college enrollments, gaps still exist in who goes to college. As low-income and minority students continue to be underrepresented at higher education institutions, policy makers have begun to develop pre-college outreach programs to improve the education of our students. Please write up a policy report to (1) describe the purposes and characteristics of pre-college outreach programs, (2) summarize the impact of such programs on students’ transition from high school to college, and (3) provide suggestions for policy makers in education field. In your response, please consider data, the historical background and current status of pre-college outreach programs, and research evidence on the outreach programs’ effects on student transition to college. Address the three required elements above.
PUBLIC POLICY PERSPECTIVES EXAM QUESTIONS (Con't)

Question #2 Financial Aid and College Student Persistence

As college enrollment rates continue to increase while completion rates do not, both policymakers and researchers have begun focusing more on indicators of student persistence, and the relationship between financial aid programs and persistence. Please write up a policy report to (1) describe the purposes and characteristics of student financial aid, (2) summarize the impact of financial aid on student persistence in higher education, and (3) provide suggestions for policymakers in higher education. In your response, please consider data, the historical background and current status of financial aid programs, and research evidence of the effects on student persistence. Address the three required elements above.

Question #3 High School Exit Exam

For more than two decades, many states have required students to pass exit examinations to obtain high school diplomas. Please write a policy analysis report to (1) describe the High School Exit Exam policies, (2) discuss how such policies have affected students, and (3) provide suggestions to policymakers at the state government level. In your report, please use statistics, the historical trend of state adoption of high school exit exam policy, and research evidence on its effects. Address the three required elements above.
PUBLIC POLICY PERSPECTIVES EXAM QUESTIONS (Con’t)

Question # 4: Demonstrate you understanding of policy models

Directions: answer parts A, B and C

A. What is your “working definition” of policy? In preparing your definition please define and distinguish between “Policy Analysis” and “Policy Advocacy”.

B. Education leaders should have a good understanding of policy that affects education in the pre K-12 area, broadly speaking. Briefly defend this assertion in 3 to 4 paragraphs

C. Theorists often refer to various models for understanding the policy process. These models include: Institutionalism, Rationalism, Group Theory, Elite Theory and Incrementalism. Identify the characteristics of three of these models and your assessment of the strengths and weaknesses of those models in understanding policy development and implementation. In preparing your response you may find it useful to prepare a table to structure your response.

<table>
<thead>
<tr>
<th>Policy Analysis Model (prepare response for 3 of these models)</th>
<th>Identify / explain characteristics of model</th>
<th>Identify / explain strengths and weakness of model in helping education leader understand the development and implementation of education policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutionalism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rationalism</td>
<td></td>
<td></td>
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<tr>
<td>Group Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elite Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incrementalism</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PUBLIC POLICY PERSPECTIVES EXAM QUESTIONS (Con’t)

Question #5: Demonstrate your ability to frame a PK-12 policy issue/question

Based upon your knowledge, identify an important policy issue in the PK-12 education sector:

- Develop, define and explain in clear terms what you see to be one (1) significant policy question.

- Identifies and explain one or two policy alternatives to the policy question you identified

- Identify two or three groups or organizations who would be the principal actors in this policy discussion e.g., parents, principals, politicians, unions, school boards etc., and explain why they would be key actors

- Describe the evaluative criteria that the key actors you identified in this policy discussion might be inclined to use to assess the effectiveness of the significant policy issue/question you have identified. Because group interests generally influence the means by which they evaluate a policy, the criteria will vary by actors.

Question #6.

Understanding how “power” is obtained and used in school systems is an important part of a school administrator’s knowledge base and skill set. Identify, explain and discuss Fowler’s “Three Dimensions of Power” and what implications these dimensions have on a school administrator’s influence and ability for developing and implementing new policy. Be sure to consider all important stakeholders within a school district.
Question #7.

You are a newly appointed superintendent of schools for a poor, urban school district of roughly 7000 students. Currently, there is no district policy for “bullying.” This has created numerous issues for district principals not only with student deportment but also with parent/teacher/school interactions and relations. Additionally, individual school PTAs continue to bring up the proliferation of “bullying” on the playgrounds of their local neighborhood elementary schools. Consequently, the BOE has charged you with developing and implementing a district policy for “bullying.”

Employing one of the several theories of the policy process or policy cycle, state the steps and explain how you would analyze, review and suggest possible policy changes concerning a district policy for “bullying.”

Question #8.

Identify and discuss the general principles a school leader should be familiar with for influencing policy formulation and adoption at both the state and national levels. Additionally, be sure to include in your discussion the three general approaches Fowler specifically identifies for influencing policy formulation and adoption.

Question #9.

a) Identify, define and discuss the five (5) elements that contribute to a strong definition for a particular policy issue.

b) Using the five (5) elements identified above, select one of the current issues listed below and develop a comprehensive policy definition for the issue of your choice.

1) School Choice
2) Merit Pay
3) Tenure
4) Tracking/Ability Grouping
5) Superintendent Salary Caps
III. ORGANIZATION

K-12 Qualifying Doctoral Examination

ORGANIZATION EXAM QUESTION

The relationship between the ability to reframe as advanced by Bolman and Deal and the notion of influencing organizational change is theoretically very direct. Reflect on a significant change in your organization. Evaluate its success or failure. In your opinion, was the appropriate frame applied? Why or why not? Was re-framing a possible option to either improve or enhance the final outcome? Explain your conclusion(s).
IV. RESEARCH

K-12 and HRED Qualifying Doctoral Examination

RESEARCH EXAM QUESTION

Choose one of the general topic areas listed on the next page and develop a research study that addresses the topic. As you explain the study, be sure to include each of the following:

- A statement of the “problem” you intend to investigate.
  The problem statement should define the scope (magnitude) and the precise nature of the problem (dilemma, phenomenon of interest), as well as the usefulness of framing the problem in this form.

- Research questions that derive logically from your problem statement.

- A coherent research plan and appropriate methods of data collection.
  Identify what data are required to answer the questions, the sources of those data, and how the data will be obtained. Justify the effectiveness of this design in addressing the research questions.

  As you explain the data you intend to collect and the methods for doing so, be sure to clarify your strategy for ensuring reliability and validity.

- Data Analysis Plan. Articulate your plan for organizing and analyzing the raw data; specify how your analytical approach will address your research questions.
RESEARCH EXAM QUESTION (Con’t)

Research Topic Choices – Choose only one topic below:

K-12 Research Topic Choices

1. The influence of teacher use of higher order questions in Grade 8 mathematics classes on Grade 8 student performance on the annual statewide test of skills and knowledge in mathematics.

2. The relationship between implementing differentiated tiered activities in Grade 9 mathematics on student satisfaction in their mathematics courses.

3. The factors that influence high school seniors’ decision not to attend college.

HRED Research Topic Choices:

4. The role of adjunct/contingent faculty in university governance.

5. Persistence/Success of female students in STEM fields (Science, Technology, Engineering and Mathematics).

6. Student success at community colleges
QUALIFYING EXAMINATION
HRED and K-12

v. STATISTICS EXAM QUESTIONS

Spring 2011

Statistical Analysis Questions
Answer all of the following questions. Fully explain your rationale for interpreting the statistical information. The following background is provided as a context for all questions and analyses that follow. Any similarities to real programs or data are purely coincidental and are not intended as factual.

Background
As the nation's population has become increasingly diverse and higher education has been reaching out to traditionally underrepresented student populations over the past several decades, the profile of the undergraduate student body has changed. Among college freshmen, many are the first in their families to attend college (first-generation students). Although some research has examined first-generation students' transition to postsecondary education, little is known about their learning and cognitive development during college and what can be done to promote their success. In fact, many first-generation college students find it difficult to adjust to college learning partly because their parents do not have first-hand experience dealing with the demands of college life. In a public university with a large body of first-generation students, the vice president is interested in understanding the cognitive development of undergraduate freshmen who are the first in their families to pursue higher education. To achieve this goal, he asked a group of researchers to carry out the following several studies.
**Question #1** The vice president would like the research team to examine whether the reading comprehension skills of first-generation freshmen of 2010 differ significantly from those of the first-generation student freshmen of 2009.

To carry out the study, the research team first randomly selected a group of first-generation undergraduate freshmen of the 2010 cohort, and used the Reading Comprehension test module to assess these students' skills in inferring, reasoning, and generalizing at the end of the Fall 2010 semester. The test is designed on a scale between 0 and 800, with higher score indicating higher level of reading skills. Then, they located the 2009 record and found the first-generation undergraduate freshmen's mean Reading Comprehension score in 2009 was 570. They conducted a statistical analysis of the data, and produced the following output. Please complete a thorough review of the analysis below. Be certain to report and interpret all essential components of such an analysis. What does the following output reveal to you? Complete a thorough review of the analysis presented below, including your comments on policy, practice and future research.

**Table 1a**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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</thead>
<tbody>
<tr>
<td>Reading Comprehension Score in Fall 2010</td>
<td>201</td>
<td>579.50</td>
<td>91.92</td>
<td>6.48</td>
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**Table 1b**

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
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</thead>
<tbody>
<tr>
<td>Reading Comprehension Score in Fall 2010</td>
<td>1.47</td>
<td>200</td>
<td>.15</td>
<td>9.50</td>
<td>-3.29 22.28</td>
</tr>
</tbody>
</table>
Question #2 In the vice president’s second inquiry, he would like to understand whether first-generation students differ significantly from their traditional peers in reading comprehension skills among the 2010 cohort. Thus, the research group randomly sampled a group of the 2010 cohort students, administered the reading comprehension assessment, and conducted a statistical analysis. Please report and interpret the results, including comments on policy, practice and future research.

Table 2a

<table>
<thead>
<tr>
<th>First-generation students</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<tr>
<td>Reading Comprehension Score in Fall 2010</td>
<td>No</td>
<td>278</td>
<td>594.42</td>
<td>87.28</td>
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<td></td>
<td>Yes</td>
<td>142</td>
<td>573.37</td>
<td>88.61</td>
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Table 2b

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
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<tr>
<td>Equality of Means</td>
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<td>.90</td>
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<tr>
<td>t-test for Equality of Means</td>
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<tr>
<td></td>
<td>df</td>
<td>418</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.02</td>
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<td></td>
<td>Mean Difference</td>
<td>21.05</td>
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<tr>
<td></td>
<td>Std. Error Difference</td>
<td>9.05</td>
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<tr>
<td></td>
<td>95% Confidence Interval of the Difference</td>
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<tr>
<td></td>
<td>Upper</td>
<td>38.84</td>
</tr>
</tbody>
</table>
**Question #3** The vice president's third interest is to understand if the Reading Comprehension score in the first semester is related to the first-year college GPA, for all students of 2010 cohort. To examine this issue, the researchers used the sample for Question #2, collected the scores on these two assessment items, and did a statistical test with the output below. Complete a thorough review of the analysis. Be certain to report and interpret all essential components of such an analysis. What does the following output reveal to you? Complete a thorough review of the analysis presented below, including your comments on policy, practice and future research.

**Table 3**

<table>
<thead>
<tr>
<th></th>
<th>Reading Comprehension Score in Fall 2010</th>
<th>first-year college GPA</th>
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<tr>
<td>Reading</td>
<td>Pearson Correlation</td>
<td>.28**</td>
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<tr>
<td>comprehension</td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>Score in Fall 2010</td>
<td>N</td>
<td>420</td>
</tr>
<tr>
<td></td>
<td></td>
<td>420</td>
</tr>
<tr>
<td>first-year</td>
<td>Pearson Correlation</td>
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<tr>
<td>college GPA</td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>420</td>
</tr>
<tr>
<td></td>
<td></td>
<td>426</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**
Question #4 Given that first-generation students tend to receive less support from their families because their parents have no college experience, the vice president proposed that the University should take initiatives to facilitate these students' development and success by getting their parents involved. Accordingly, administrators and the research team developed a workshop for the parents of first-generation students. During the workshop sessions, tutors discuss with these parents strategies on how to prepare their children for the increased academic demands in college, how to effectively encourage children for effective time management, and what academic services are available on campus for their children. Before and after the implementation of the workshop program, these parents were surveyed about their levels of parental involvement on a scale from 0 to 80. A higher score indicates a higher level of parental involvement. By comparing the parenting skill scores before and after the parent workshop, the researchers assessed the effectiveness of the workshop program on improving the level of parental involvement and support. Complete a thorough review of the analysis presented below, including your comments on policy, practice and future research.

Table 4a

<table>
<thead>
<tr>
<th>Paired Samples Statistics</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Pretest</td>
<td>62.59</td>
<td>201</td>
<td>9.84</td>
<td>.69</td>
</tr>
<tr>
<td>Posttest</td>
<td>65.27</td>
<td>201</td>
<td>10.90</td>
<td>.77</td>
</tr>
</tbody>
</table>

Table 4b

<table>
<thead>
<tr>
<th>Paired Samples Test</th>
<th>Pair 1 Pretest - Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paired Differences</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
</tr>
<tr>
<td></td>
<td>Std. Error Mean</td>
</tr>
<tr>
<td></td>
<td>95% Confidence Interval</td>
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<tr>
<td></td>
<td>Lower of the Difference</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
</tr>
<tr>
<td>t</td>
<td>-14.72</td>
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<tr>
<td>df</td>
<td>200</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
</tbody>
</table>