

**“Chance favors the connected mind.”**

**Steven Johnson**

*Where Good Ideas Come From:  
A Natural History of Innovation*

## ***Connecting Minds***

***Emergence of a future bent, writing/thinking intensive psychology course***

### **Occasional Paper #10**

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**J. E. Fluellen Jr.**

**Adjunct Professor of Psychology  
Edward Waters College**

**Future of Learning Certificate  
2010 Summer Institute  
Harvard Graduate School of Education**

#### **Abstract**

How might students engage mindful learning? How might the professor engage mindful teaching? Both questions derived from fieldnotes a participant observer had created for the Future of Learning 2010 Summer Institute (Harvard Graduate School of Education) and the Tests and Measurements course, fall 2010 at Edward Waters College (EWC). Additionally, with an eye on the inquiry set, a participant observer designed a new Theories of Learning course—one that embodied research based practice. The new EWC course used Jerry Fluellen’s power teaching prototype for the design, delivery and assessment of instruction. Students encountered daily writing to learn activities and thinking routines. They examined disciplinary ideas including Ellen Langer’s landmark mindfulness theory applied to learning and mind brain education as a new direction in theories of learning. In the final project, they became young scholars presenting power point slide shows about the Barack and Michelle Obama Charter School of Tomorrow. They completed a GRE-like final examination of writing and thinking. Evidence of mindful learning and teaching emerged.

Washington D.C. 2004

Power Teaching began life in chaos. District of Columbia Public Schools (DCPS) had three high schools that belonged with the best in the nation. Many of its other high schools ranked with the worst. The United States Department of Education had defined the DCPS curriculum as dysfunctional—a status that hid outstanding teaching, coaching and leadership at even the lowest ranked schools.

Enter Clifford Janey. Latest in a long line of short term Superintendents, Dr. Janey was the innovator who took on the task of turning the district around before Michelle Rhee. He created a curriculum round table to review curricula from around the country. One from California and another from Massachusetts stood out. The Department of Education said those curricula were exemplary. DCPS adopted the Massachusetts curriculum and matched it with a new standardized test and new text books better designed to implement a more rigorous language arts and mathematics program from Pre-K to 12. A systems thinker who aimed at creating fundamental solutions for fundamental problems, Dr. Janey also created a strategic framework for excellence, thus paving the way for the present IMPACT model of school reform in DCPS.

All these changes happened within one year. Teachers and principals had to learn a new curriculum, deal with a new standardized test, new text books and a new vision at once. Mass training in the new standards in 2005 helped but did not relieve the stress most teachers and principals felt. The need for a prototype that would connect the dots among an array of new initiatives had become clear.

One Superintendent's literacy coach who had been involved in training trainers for the new standards, the curriculum round table, and text book adoption process, recognized that another fundamental problem related to making DCPS grow from one of the worst districts in the nation to

one of the best was the need for a prototype to link standards with the design and delivery of instruction. Enter the power teaching prototype.

In collaboration with professors at Howard University, the District of Columbia Area Writing Project (DCAWP), the principal of the new McKinley (High Tech) High School, and a Teacher Consultant from DCAWP, the literacy coach created a model to link the new standards for language arts, culturally relevant teaching, Howard Gardner's MI approach based on multiple intelligences theory and a framework for teaching thinking developed by Shari Tishman, David Perkins, and Eileen Jay at Harvard University's Project Zero Research Center. Six 10<sup>th</sup> grade classes at McKinley served as the sample population. Students engaged a year-long research project based on power standards in the new language arts curriculum. "Mars 2030" led to interdisciplinary research papers across ability levels of 135 students who, in turn, presented video-taped, power point slide shows of their papers in an end of year mini conference entitled "The Martian Village 2030." Their scores on the new standardized test for DCPS earned the school a high rank in the No Child Left Behind benchmark for that year. The Board of Education gave the project an official commendation.

Over the next few years power teaching became the topic of a key note speech for the Georgia Coastal Writing Project's Regional Conference and the basis of a "Faces of Freedom" language arts/social studies project for 5<sup>th</sup> graders in a Savannah, Georgia Magnet School for the Arts. Then, in Jacksonville, Florida the prototype was featured in an ethnographic study about teaching kindergarten children algebra; professional development in Peter Senge's fifth discipline framework with leaders in the Obama Family Network and St. Luke's Episcopal Church; and, finally, the design, delivery and assessment of writing thinking intensive psychology courses at Edward Waters College. To date, nine occasional papers (outcomes of practice based research) document the development of Power Teaching (P=fm/c).

Enter the Future of Learning (FoL) 2010 Summer Institute at Harvard University Graduate School of Education. The power teaching prototype collided with ideas in the institute's think tank-like week of examining three forces of change in education: globalization, digital revolution and mind brain education. The prototype's 4<sup>th</sup> generation had been the result. Now a simple equation could connect the dots among the future of learning, mindfulness theory, and context:  $P=fm/c$  (where P is power teaching; f is the future of learning; m is mindfulness theory, and c is context). Now just three factors could be used to design, deliver and assess instruction for present and future psychology courses at Edward Waters College. "The Empty Cup: Power Teaching in a Digital Age (ED 517755), the ninth in the occasional paper series, tells the story of Harvard FoL's impact on a fall 2010 Tests and Measurements course that embodied the prototype.

"Connecting Minds" (the 10<sup>th</sup> occasional paper in the series on power teaching) offers a twist. It uses fieldnotes like time lapse photography. Events, puzzles, data weave a narrative of research based practice with its uncertainties and surprises. Readers see the Theories of Learning seminar unfold over its last six weeks.

Jacksonville, Florida 2011

***Vision***

***“Edward Waters College will become a national model for a dynamic, globally-diverse Learning-centered community that champions academic excellence through innovative teaching and learning strategies...”***

Edward Waters College

Theories of Learning Seminar

Hatcher Stewart Room 202

March 22, 2011

Midterm exams done, two weeks of packed instruction featured a feedback workshop on results of the midterm (CRAFTS “writing to demonstrate learning” strategy), an interactive power point lecture on mind brain education, and two workshops on deep understanding of a peer reviewed article-about mind brain education as a new direction in theories of learning. The thought demanding task on the midterm essay had been to compare Ellen Langer’s research based concept “mindful learning” and her psychological measure of the trait mindfulness in the Langer Mindfulness Scale. Students had six weeks of intense instruction, then the midterm as a pretest. Two weeks later they engaged the post test, a word processed revision of the hand written essay.

The midterm, thus, became an alternative pretest, one that might be intelligence fair because it was based on actual instruction in contrast to one given students during the first week of class. The feedback workshop following the pretest allowed students to engage what Tina Blythe once said about “understanding performances.” A Harvard Project Zero researcher, Blythe asserted that assessment provided students with opportunities to “show what they know” as well as “build new understanding.” The post test would measure growth.

During the workshop, each one received personalized feedback from the professor about improving the essay no matter how high its score on the Marzano rubric for effective comparison. The whole class compared essays with the rubric as well as examined sample student works that scored well. Finally, given the layers of feedback, they had to create word processed revisions. Note that midterm essay scores (pre and post) provided the first hard data about the degree of mindful learning and teaching in Theories of Learning 2011.

Examine the frequency distribution of scores based on Robert Marzano’s rubric for effective comparison. Note that Marzano’s rubric for effective comparison is a 4-3-2-1-0 ordinal scale.

<b>Rubric Scores</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>Frequency of Scores</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>1</b>

While no essay scored the highest quality (4), seven scored three (3) and three scored two (2). Those rankings indicated a reasonable grasp of the hidden game of comparison (items, characteristics, similarities and differences) as well as disciplinary content (Langer’s concept “mindful learning” drawn from her 30 years of research on mindfulness theory and the Langer Mindfulness Scale as a psychological measurement of the mindfulness trait). One student scored one (1) which represents some disciplinary misunderstanding as well a weaker understanding of the intellectual process of effective comparison. One student scored zero (0)—not enough evidence to make a decision; i.e., the student failed to take the midterm. In sum, 10 out of 12 passed the midterm. As a result, 10 out of 12 seemed prepared for the word processed revision (post test) as well as the demands for effective comparison in the final project and GRE like final examination.

Additionally, after an interactive power point to introduce mind brain education, students used Jerry Fluellen's SQS method of deep thinking (See Asa Hilliard's "Sba.") to scan, query and synthesize ideas in a peer reviewed article: Kurt Fisher's "Why mind brain education? Why now?" His article gave students a baseline for their selected literature reviews of mind brain education. For example, core ideas in the Fisher article included the following: (1) mind brain education is a new field in psychology—one deriving from the combination of education, biology and cognitive science; (2) the new lines of research from mind brain education can inform practice; (3) in turn, practice can inform research; and, (4) the new field requires mindful use of research findings to separate wheat from shaft.

To help synthesize ideas in the article, students played the partner reading game, reading aloud and thinking aloud with a partner who read silently and thought silently, switching back and forth, paying attention to ideas in the article as well as their own perspectives as readers. Also, they used Perkins's knowledge as design method of critical thinking to make a cognitive map of the core ideas in the article along the lines of its purpose, structure, model case and argument. In brief, they engaged Howard Gardner's "synthesizing mind" and Ellen Langer's "creating new categories." Participating scholars in Theories of Learning 2011 stood ready to learn more.

In four weeks, each final project would include at least two peer reviewed articles about mind brain education. Also, with a research question in mind, each student would conduct a selected literature review from the general to the specific: (1) Google and YouTube with an eye on primary sources; (2) Education Research Information Center with an eye on peer reviewed articles; (3) and specialized sites such as the International Mind Brain Education Society and Harvard University Graduate School of Education. Each student would strive to go beyond the two-peer-reviewed-article-limit to learn as much as possible about mind brain education before designing the power point presentation.

On April 12 and 14, 2011, Theories of Learning 2011 students would deliver power point presentations to examine how the Obama Charter School of Tomorrow might foster mindful learning and mind brain education. Thus, after spring break, the selected literature reviews would become the main emphasis right up to the presentations. As an extra part of the literature review, students might examine a YouTube video of the talk Mary Helen Immordini Yang gave on mind brain education at Stanford University. Considered one of the top researchers in the field, Dr. Immordini -Yang gave that same talk for Professor Fluellen's class on mind brain education when he studied at the Future of Learning 2010 Summer Institute, Harvard Graduate School of Education. Students might compare core ideas in her talk with ideas in the Kurt Fisher article, one she co-authored.

Meanwhile, the two inquiries for reflecting on the semester remain: (1) how might students engage mindful learning? (2) How might the professor engage mindful teaching? Drawing from the four factors in Langer's psychological scale for operationally defining the construct mindfulness, the terms can be defined conceptually. Mindful learning is the demonstration of novelty producing, novelty seeking, flexibility and engagement. Mindful teaching on the other hand, creates a platform for producing and seeking novelty, thinking and acting flexibly and engaging disciplinary content. With the inquires and definitions up front for the second set of fieldnotes, it is possible to examine data more closely

Tuesday March 22, 2011

Today the professor collected word processed revisions of the midterm and reviewed core ideas from the mind brain education article. We applied the SQS method (one of the thinking routines features in the course) to Shulte's article "Hybrid Schools for the I-generation." Next, we completed the SQS with a partner reading game and cognitive map. Did the SQS work on Shulte's article about hybrid charter schools in the *Harvard Education Letter* represent mindful teaching? For example in the scan step, learners examined how the author had organized her thinking. Learners examined titles, pictures, graphics etc. They connect their prior knowledge and a sketch of the author's core ideas. Then, learners organized their own thinking by writing a set of knowledge as design questions. They queried about the purpose, structure, model case, and argument of the article. Questions such as "Why did Shulte want readers to know about hybrid charter schools?" fostered critical thinking. The logic to the SQS was that with the Scan and Query steps completed, learners read for answers to their questions. In the synthesis step, learners used any number of strategies to connect the author's ideas. Creating story maps of core ideas or writing summaries, for examples, provide ways of synthesizing information. When students return to the Shulte article next week, they will synthesize Shulte's core ideas.

It seemed like the activity in all exemplified mindful learning. Students produced and sought novelty in the Scan, Query and Synthesis steps. They thought flexibly and engaged core ideas of the article in each step. Likewise, the professor created a platform for novelty producing and seeking as well as flexibility and engagement. Instead of just giving students a peer reviewed article to read, the professor scaffolded the instruction for depth of understanding with a specific thinking routine. Said more plainly, in David Perkins' new theory of teaching, students "learned the game of learning," and they "worked on the hard parts."

Thursday March 24, 2011

Today students reviewed the SQS with an eye on the synthesis step, but we spent most of the time on the template for the final project in response to student needs. Next week, we will encounter a workshop on effective comparison--what David Perkins called the “hidden game,” and “hard parts.” The workshop might include comparing scores on the midterm revisions, Steven Johnson’s discussion of reef, city, and Web along the lines of “innovation” as a profound characteristic and definitions of brain versus mind. Also, next week students return to the Shulte article on hybrid schools with an eye the final projects. Additionally, students might start the process of synthesizing information for the final project. How does mindful learning compare with mind brain research?

Note that we might not have time to view the one hour mind brain education lecture on YouTube until the week before final project presentations. Students might have to view the lecture as part of their selective literature reviews. Time needed to prepare for the presentations has become the priority.

Tuesday March 29, 2011 (analysis of pre and post tests)

True to form, we engaged a multi layered workshop to uncover the hidden game of effective comparison and work on the hard parts—two of the seven principles from David Perkins’ new theory of teaching. Students experienced a dramatic reading of Kenneth Koch’s poem “Two Trains” to wrap their minds around the idea of comparison. Then, using Jerome Bruner’s theoretical ideas about learning, students examined a concrete activity—comparing two Chinese exercise balls (items, profound characteristics, similarities and differences). They listened to a dramatic reading of a passage from Edwidge Dandicat’s short a story about a 19 year Haitian boy and girl observing acts of oppression in Haiti and writing letter to one another about respective experiences.

Lastly, they compared their word processed revisions of the midterm essay on Ellen Langer’s mindful learning concept and the Langer Mindfulness Scale as a psychological measurement. They compared their essays to Robert Marzano’s rubric for effective comparison.

Note that within the context of a writing/thinking intensive course, the midterm essay and revision scores provided more hard data about the degree of mindful learning and teaching in Theories of Learning. In both assessments the aim was to measure the two understanding goals stated in the syllabus: (1) develop mindful learning; (2) engage effective comparison. Results are mixed.

Rubric Scores	4	3	2	1	0
Frequency of Scores					
Midterm	0	7	3	1	1
Revision	2	5	4	0	1

Does this mean that the class has bifurcated? Does one group represent a high level of mindful learning while the other group is less mindful? Has the teaching been mindful? How might achievement improve? Seven essays reached the upper regions of the rubric, but four are average scores—they show some understanding but not command. One failed to submit a revision. Nor did that student take the midterm. Consecutive absences might indicate that the student has unofficially withdrawn from the course. However, if the average group is added to the high scoring group, 11 out of 12 students demonstrated an understanding of the course goals.

Thursday March 31, 2011

We reviewed the workshop on effective comparison and engaged the “synthesis” step of the SQS method of deep reading of Shulte’s article. We played the partner reading game and created a cognitive map of core ideas in her April 2011 article from *Harvard Education Letter*. Finally, we examined the template for the power point slide presentation in the forth coming mini conference and reflected. Reflection questions became these: (1) what did you learn today; (2) what surprised you; (3) what more do you want to know?

By way of summary, the chart below identifies daily writing to learn and writing to demonstrate learning activities featured in Theories of Learning. Each activity provided an opportunity for students to demonstrate learning as well as make mistakes. As “ongoing assessments” in the language of Harvard Project Zero researchers, the activities also build new understanding of the disciplinary content.

**Theories of Learning 2011**

**(a writing/thinking intensive psychology course)**

<b>Type</b>	<b>Purpose</b>	<b>Comment</b>
<p><b>Writing to learn</b></p> <ul style="list-style-type: none"> <li>• <b>Harvard 3-2-1</b></li> <li>• <b>College Board’s quick write</b></li> <li>• <b>Marzano’s t-chart and Venn diagram</b></li> <li>• <b>writing break</b></li> <li>• <b>Fluellen’s SQS and final project feedback form</b></li> <li>• <b>cognitive maps</b></li> <li>• <b>David Perkins’ knowledge as design method of critical thinking</b></li> </ul>	<p><b>Ongoing assessment of writing and thinking along the lines of the twin understanding goals for the course:</b></p> <p><b>(1) develop mindful learners; (2) create effective comparisons</b></p>	<p><b>Strategic daily writing/thinking activities that provide ongoing assessments of student understanding and misunderstanding of disciplinary content as well as process content</b></p>
<p><b>Writing to demonstrate learning</b></p> <ol style="list-style-type: none"> <li>1. <b>midterm comparison essay (as alternative pre test)</b></li> <li>2. <b>word processed revision of midterm comparison essay (as alternative post test)</b></li> <li>3. <b>final project: present a power point slide show in a mini conference</b></li> <li>4. <b>GRE-like final examination of writing/thinking</b></li> </ol>	<p><b>Rubric guided assessments of understanding of the twin course goals</b></p>	<p><b>Strategic assessments to create a picture of individual and collective understanding of the twin course goals</b></p>

Does the accumulative effect of writing/thinking activities foster mindful learning? Does the strategic placement of writing to demonstrate learning assessments measure mindful teaching as well as mindful learning? And beyond the reach of this paper: does the practice of mindful learning increase density and plasticity in neuronal networks?

Next week, we will engage workshops to prepare mock power points in preparation for the talks in the mini conference. Grades for presentations of graduating seniors will be this: score times three. That solves the problem of giving them a two hour GRE like final examination in the less than the two hour time slot assigned to senior final examinations. Also, it maintains the integrity of the examination administered May 2011. Only the test designer knows the content of the GRE-like final examination of writing/thinking.

Note that extra preparation for the presentations includes creating templates set in David Perkins' knowledge as design method of critical thinking. The template offers questions about purpose, structure, model case and arguments. Translated such questions become the following: (1) Why did we examine a possible charter school of tomorrow? (2) How do core ideas of Langer's mindfulness theory relate to core ideas of mind brain education? (3) How does Shulte's article on hybrid schools provide a comparison with the Obama Charter School of Tomorrow? (4) What is missing from her article? And what new questions emerge about charter schools tomorrow? Such critical thinking might organize the thinking in the power points and improve understanding performances.

Tuesday April 5, 2011

Today, students in Theories of Learning Psy 421 reviewed the template for final presentations. They examined ideas behind each of the critical thinking questions used to organizing thinking in the template. Then, they formed work stations to make mock power point slide shows. Kianna Samuels had a draft already done so she met with the professor in a personalized learning session at the classroom desk top computer to critique her presentation in advance. Also the professor downloaded the template for students who had flash drives and emailed attachments to students who still could not get into the new Moodle. The class workshop

on Thursday will offer additional time for personalized instruction with an eye on the final presentations. For housekeeping: on Thursday, the professor needs to finalize the speaker schedule in order to make programs for the mini conference.

Finally, the professor needs to keep the ethnographic questions up front and their corresponding conceptual definitions as new hard data emerges. Additionally, attendance might serve as data. Students who come to class regularly benefit from the daily writing to learn activities, thinking routines (such as Marzano's effective comparison strategy and David Perkins's knowledge as design method of critical thinking); as well as interactive lectures with the professor's power point presentations, just in time commentary on student recitations and games for thinking. Students who have high absences and excessive tardiness miss opportunities to learn, and they would have less support for the independent learning activities such as the selective literature reviews of mind brain education. More than any of the graded understanding performances represented in the writing to demonstrate learning activities, the GRE-like final examination might favor students who have regular attendance, completed assessments and relative progress in understanding difficult text (Langer's mindfulness theory and mind brain education). As Steven Johnson says, "chance favors the connected mind.

Thursday April 7 2011

Students finished preparing for the mini conference: teams met, created mock power points on card stock paper and had personalized conferences with the professor. In turn, the professor created a power point to introduce and contextualize the conference. Also, the professor made a speaker's schedule and feedback form. Next week, the torch passes to students. They will facilitate learning. "One who learns teaches" (African proverb).

## **Barack and Michelle Obama Charter School of Tomorrow:**

### **Connecting mindful learning and mind brain education**

#### **A mini conference for Theories of Learning 2011**

Tuesday April 12, 2011

On the same day History and Systems students engaged a mini conference on the topic “Obama University 2030: Creating a Learning Organization from Scratch with Peter Senge’s Fifth Discipline Framework,” a smaller group of Theories of Learning students gathered in Hatcher Steward 202 to deliver power presentations that synthesized a semester of work. They connected Ellen Langer’s landmark mindfulness theory and mind brain education, a new direction in theories of learning. Three individual speakers shared insights: Kianna Samuels, Nelson Marsh and Robert Winston. (Note that Mario Wade did not show up for his scheduled talk.) The participating scholars in the audience as well as the Professor gave two rounds of feedback for each speaker. In the first round the question guiding feedback was this: “What did we like about the presentation?” In the second round, the question was this: “What might need to be improved?” So put, feedback was designed to help a speaker or team of speakers to see other perspectives. Additionally, Dr. Cornel Social Science Department Chair, took time out of her schedule to observe presentations in both mini conferences, Theories of Learning at 1:00PM and History and Systems at 2:30PM, both in HS 202. A former dean of a top 100 university, her presence served to inspire students.

Once the participant observer (has had time to analyze the comments on the feedback instruments, he will publish results for each speaker’s further reflection. The feedback also will become part of the data collected for occasional paper #10, the final one in his series narrating the development of the power teaching prototype (2005 to 2011). With the completion of occasional paper 10, all the papers together will form a book on innovative instruction—especially the

invention of future bent, writing/thinking intensive psychology courses at Edward Waters College and beyond. More immediately, the data from the feedback instruments might be included in the “Notebook” that Dr Martin, Assistant Vice President of Academic Affairs, wants professors to prepare for each course. Additional peer evaluations on the presentations next Thursday will add value to reflections on student achievement. Finally, recall the ethnographic-like questions deriving from past fieldnotes. The participant observer will examine data from the final projects with the dialectical questions in mind. The next presenters are as follows: Veronica East and Sharon Dotson (team); Mario Wade (solo); Ace Lane, Darlene Smith and Mercedes Smith (team); Joan Dearing and Regina Wilson (team).

Thursday April 14, 2011

Do the student authored power point presentations provide  
evidence of mindful teaching and learning?

With “4” as the top of Robert Marzano’s rubric for effective comparison, 9 of the 11 speakers earned scores of 4+ for the solo or team power point presentations. In each case, the presentation not only met the description for quality at the four gradient, the talk added original insights about mindful learning, mind brain education and/or charter schools of tomorrow. One student presentation scored 4—top quality on the rubric. One student scored 3, next to top quality. The thought demanding task had been to present research based ideas about (1) Ellen Langer’s mindful learning as drawn from her 30 years of research on mindfulness, (2) mind brain education based on peer reviewed articles and (3) the idea that charter schools of tomorrow might be more along the lines of Shulte’s article on hybrid charter schools. In all, 11 out of 11 students who presented scored equal to or greater than a three (3) score on Marzano’s rubric for effective comparison. This graded assessment met the disciplinary understanding goal as well as the

process understanding goal for Theories of Learning 2011. 11 out of 11 students demonstrated mindful learning. The platform for mindful learning was evident.

The GRE-like final will add value to the set of “writing to demonstrate learning” (graded) assessments strategically placed in the course. In all, the assessments will create a picture of individual and collective achievement along the lines of the twin course goals: (1) develop mindful learners; (2) create effective comparisons.

By way of summary, the big picture supporting growth of student capacities for mindful learning and effective comparisons might be inferred from frequency distribution of scores on three graded assessments. Again, scores on the GRE-like final parts one and two will add value to this picture.

**Distribution of Scores for Three Performances of Understanding**

Assessment	4+	4	3	2	1	0
Midterm essay	0	0	7	3	1	1
Midterm essay revision	0	2	3	4	0	3
Final Project Presentation	9	1	1	0	0	1
N=12						

Once students have engaged the GRE-like final examination of writing/thinking, the assessment picture will be more complete. Educational Testing Service constructed the GRE to sort people aspiring to graduate school. Its writing examination, in particular, favors analytical thinking. Similarly, the GRE like examine measures the same higher order thinking so valued in graduate work. Part one of the GRE like examination poses two questions that synthesize core ideas of the course (mindful learning and mind brain education). Using their knowledge of effective comparison, students select one of two questions to demonstrate both disciplinary understanding and process knowledge.

1. How does Langer's mindful learning concept compare with core concepts of mind brain education?
2. How does the Langer Mindfulness Scale (LMS) compare with Langer's mindful learning concept?

Like the GRE exam, Part two measures critical reading and an analytical response. However, while the GRE exam uses a basal passage suitable for any major in the applicant pool, the exam for the GRE-like exam is for psychology majors. It features a peer reviewed article from *The Futurist*, one a psychologist wrote.

Edward Waters College

May 2011

In all, students in Theories of Learning spring 2011 appear to have met the course understanding goals. That became evident in the “Connections Cube Game” for critical thinking. One of Harvard’s six games for critical thinking, this activity helped students connect the knowledge gained from theories of learning as well as imagine possible future uses of ideas such as mindful learning and mind brain education. In turn, the game set up a final workshop, an advanced examination of effective comparison that featured mind brain core concepts such as “density” and “plasticity.’ As students responded to the game and the workshop activities, they demonstrated their collective capacity to produce and seek novelty, think flexibly and engage disciplinary content. So by the final week of the course, students had become mindful learners. The writing/thinking intensive GRE-like final examination requiring a synthesis of core disciplinary ideas in the course and an analysis of a peer reviewed article would affirm or disaffirm this assertion.

Results of the GRE final affirmed that half of the eight students engaging the final examination of writing and thinking demonstrated achievement at the higher end of the scales: Most performed better on part one which used Marzano’s rubric for effective comparison. But no one scored in highest region on part two (6 on the GRE rubric). It could be that even in a course in which students wrote exposition every day, argumentative writing needed explicit attention. The transfer from writing to explain and writing to persuade needs a boost. Any future Theories of Learning seminar must at least consider David Perkins’ suggestions: “work on the hard parts” and “uncover the hidden game” of argumentative (analytical) writing within the context of deeper disciplinary understanding.

Beyond fieldnotes, one question for the emergent tomorrow, however, is this: What counts as a future bent, writing/thinking intensive course? Both the spring 2011 Theories of Learning and History and Systems psychology courses embodied the reinvented approach suggested in the inquiry. Both courses used Jerry Fluellen's Power Teaching Prototype ( $P=fm/c$ ) for the design, delivery and assessment of instruction. Both featured daily writing activities and thinking routines as part of the reflective learning process. Each course was the "adjacent possible" of power teaching—a phenomenon described in Steven Johnson's new book *Where Good Ideas Come From*. However, systematic exploration of the inquiry may have to wait for "practice based research" in 2012 when the next Theories of Learning seminar will be offered.

For now, the "exaptation" (brand new use for  $P=fm/c$ ) as Johnson might say, can be cultivated. It seems that a future bent, writing thinking intensive course includes the following: (1) a model such as the power teaching prototype to design research based practice for a digital age, (2) at least one project aimed at the future, (3) specific daily strategies for writing and thinking, (5) a strategic set of assessments that paint pictures of individual and collective achievement across time and (6) the emergent properties of practice based research and publication. Once basic principles for creating a future bent, writing/thinking intensive approach become collectively discovered at EWC, faculty will be empowered to create new courses and reinvent old courses across departments and disciplines. No two courses need be alike; yet each course would feature common principles. True to its vision of becoming a national leader for innovative instruction, Edward Waters College might one day place among *US News and World Report's* top 100 colleges and universities. That will serve as evidence of its vision made flesh.

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