

GASP! Get a Student Pondering

Brought to you by... the QEP & General Education Committees

Volume 2, Issue 5

April 2014



Before your summer begins...

No doubt, this has been a long academic year for most of us. It started with new legislation that turned our attention to dramatic changes felt by almost anyone who teaches or works directly with our students. Collaboration became a key element in our collective response to state mandates. Even now as the year comes to an end, clusters continue to map out best practices and faculty, staff, and administrators are still adjusting to new rules and expectations. But the more we work together, the more we realize that each of us can contribute to making all of us better. In this year's final issue of *GASP! Get a Student Pondering*, we invite you to consider some ideas presented from colleagues with practical strategies to teach and assess critical thinking. Our goal is always to help you "get a student pondering," and we hope you enjoy their work and find ways to apply it to your own. And as you wrap up your semester, let us be the first to wish you a wonderful summer break!

Collaboration, it turns out, is not a gift from the gods but a skill that requires effort and practice."

Douglas B. Reeves, *Transforming Professional Development into Student Results* (2010)

Inside this Issue

FACULTY CONTRIBUTORS

Eliana Mukherjee

Mindy Yale

Deborah Snowberger

Before your summer begins...
(Cover)

*Helping Students Understand
Ideological Reasoning* (2)

*Technology: Imagined—PBG
Campus Faculty and Staff
Exemplify Critical Thinking* (4)

*Cultivating Critical Thinking
Dispositions* (5)

*Trying to get your students to
write with better clarity?
Try the "SEEI" method.* (6)

About GASP (13)



Editors
Karen Pain
Helen Shub

Helping Students Understand Ideological Reasoning

By Professor Eliana Mukherjee

Ideological Reasoning

Ideological reasoning is based on our uniquely held ideologies – meaning our beliefs, convictions, core values, expectations, principles and assumptions; in essence. Facione (2011) says that from our ideologies, we reason “top-down, to specific implications about how we should live and what to think about issues of the day.” Because of its top-down nature, ideological reasoning is deductive. It begins with core beliefs and abstract generalizations which are then applied to formulating ideas and opinions about issues and events. It is axiomatic thinking, meaning that it is a reasoning approach that assumes one’s ideology is taken for granted and does not warrant close examination or questioning based on one’s faith in that/those ideologies (Facione, 2011). It helps to provide a simple understanding of an issue and is directly aligned with values.

Ideological reasoning is prevalent and helps shape our individual identities and can bind us in communities. For example, an ideology that is widely held and honored in the United States is democracy. Ideological reasoning, therefore, would cause one to question and challenge the ideology of a totalitarian government. Ideological reasoning is often used in issues of religion, ethics, politics, rules, and regulations. Some contemporary issues where ideological reasoning is used include the debate on gun control, immigration reform, definition of marriage, etc.

This “top-down” thinking is useful because it guides us in arriving at thoughts and opinions about new topics and questions that we may not have sufficient time or knowledge to address on our own (Facione, 2011). In other words, we rely on our ideology as a basis for making judgments on various matters and questions – we agree and support ideas that are aligned with our ideologies, and we tend to disapprove and re-

ject ideas that are in opposition to our ideologies.

Facione also points to some dangers associated with this type of reasoning. Most notably, when we blindly follow majority ideology, it can lead one to defending and advocating for views that are potentially harmful, misguided, and/or poorly planned (Facione, 2011). We can find various examples throughout history of ideological reasoning in wars, genocide, oppressive policies, and other forms of human suffering and social injustices.

[Continued on page 3](#)

Did you know?



Chapter summaries, videos, and interactive activities from Facione’s *Think Critically* (2011) are offered online for

FREE! Facione ex-

plains various topics related to critical thinking by using real-life examples from familiar people and movies. Follow the link to investigate 13 concepts illustrated by people such as George Carlin, Katie Couric, and Stephen Colbert, and in movies such as *Apollo 13*, *My Cousin Vinny*, *12 Angry Men*, and more.

Link: [Think Critically online](#) at The Think Spot by Pearson.

Meet Eliana Mukherjee



Eliana Mukherjee has nearly 20 years of work experience in all aspects of education, including teaching, administration, research, planning, curriculum development and teacher training. She was the Director of the American International School of Costa Rica for two years, and she taught elementary school in the United States for five years. She has worked on research projects for the World Bank on school improvement and for Harvard University on early language and literacy development. She worked as Assistant Professor in the Peace Education M.A. program at the United Nations mandated University of Peace for six years. Recently, she worked as a consultant for UNESCO/International Bureau of Education in developing guidelines for curriculum developers and teacher training institution in Angola. Mrs. Mukherjee earned her B.S. in Mass Communications from Emerson College and her Ed.M. in Administration, Planning and Social Policy from Harvard University. She is pursuing her Ph.D. at Florida Atlantic University in Curriculum, Culture, and Educational Inquiry. Eliana currently works as an Associate Professor in the teacher education program at Palm Beach State College.

continued from page 2

As educators, we must teach students to recognize ideological reasoning so that they may distinguish it from other forms of reasoning. Also, recognizing ideological reasoning may help students develop their skills in supporting conclusions, decisions, positions that they reach. When students are able to identify ideological reason, they are better able to evaluate an argument. The following are a few strategies that I use to help students recognize ideological reasoning:

Questions: I often pose questions that require students to examine other perspectives and ideologies as well as to support their assertions. Questions directed at how they arrived at a conclusion, decision or position help them recognize their reasoning and support their positions.

Teaching it: I explicitly introduce the concept of ideological reasoning to my students so that they can recognize it in themselves and in others.

Research: When covering an issue where students may fall on ideological reasoning, I have my students conduct research so they better understand the complexities and can support their positions.

Debates: I engage my students in structured debates, which challenges them to support their positions and consider the reasoning of others. Students may also take the role of a position that is counter to their own ideologies, which is often challenging for them but results in their deepened understanding of multiple perspectives.

Source: Facione, P. (2011). *Think Critically*. New York: Pearson.

Looking ahead to fall—

Professional Learning Groups forming now!

The QEP Leadership Team will begin offering monthly opportunities for small groups of faculty and staff to discuss strategies for teaching and learning. Such conversations are proven to be a high-impact practice that leads to improved student learning and greater job satisfaction among participants. If you have not been contacted by a facilitator and are interested in joining a group on your campus, contact Karen Pain. paink@palmbeachstate.edu / 561-868-3325



Technology: Imagined

PBG Campus Faculty and Staff Exemplify Critical Thinking

by Karen Pain, Quality Enhancement Plan Manager



We now have two full years under our QEP belt. Dozens of faculty and staff are beginning to make a habit of thinking about they are getting students to think critically, and many are to be commended for their efforts to move us forward as a College in becoming better at helping students develop and apply critical thinking skills. Allow me to offer a specific example, that is, “Technology: Imagined,” a recent north campus event coordinated by Dr. Barbara Scheffer.

A quick review of the College definition of critical thinking is helpful to understand how this event brought critical thinking to life. The Palm Beach State College community recognized that critical thinking is a process as we defined it as *using the skills to explore, evaluate, express, and engage in purposeful reasoning in order to reach sound conclusions, decisions, positions, and/or solutions*. Often, we hear faculty and staff refer to our set of verbs as “the 4 E’s.” I’d like to add one more: exemplify. I’m not referring to a critical thinking skill, but I am suggesting that “Technology: Imagined” exemplified critical thinking as we have defined it.

The event took place March 17-20, 2014, as a series of presentations during every class meeting time from 9:30am until 6:30pm each day. Professor Scheffer successfully engaged 25 faculty and staff, as well as 16 student presenters, who offered 23 sessions that were attended by approximately 700 participants. Faculty, staff, students, and community members enjoyed seminars on the impact of technol-

ogy as the impact was addressed from both current and future perspectives. Additionally, Scheffer was able to recruit as a primary presenter, Dr. Claudia Chiesi, a former dean at the College who in 2006 produced a human rights documentary called “[The Sugar Babies](#).” Dr. Chiesi shared her observations of countries that still exist without internet and other technologies that we take for granted in our daily lives.

During presentations, participants explored how technology affects their lives in and out of the classroom, and they had opportunities to evaluate new technologies and to express how these technologies are a help or hindrance in education. In doing so, these 700 participants engaged in purposeful reasoning throughout the week. Critical thinking as we define was fully employed.

One student enjoyed Professor Art Brockway’s presentation so much that he went twice. The student commented to Dr. Scheffer saying, “He makes me think! It’s not even my major, but I loved it!” Professor Brockway’s session was called *Thoreau and Anti-Technology*.

“He makes me think!” It’s not even my major, but I loved it!”

Student comment about Professor Art Brockway who presented “Thoreau and Anti-Technology.”

Other faculty and staff presenters included Jeanette Sullivan, Susan Setterlund, Joanne Cameron, William Paczkowski, Clyde Wilkins, Emmanuel Alvarado, Vicki Shaver, Becky Mercer, Mark Hendrix, Elizabeth Wilber, Joel Flores, Deborah Snowberger, Maura Merkal, Eliana Mukherjee, Leonie Escoffery, Heather Naylor, Sherry Stephens, Brian Findley, Barbara Goldman, Gisela Diaz, Chris Cobb, and John Smith, and S. Lizabeth Martin, assisted by Beachcomber Editor, Patricia Medina.

Kudos to Professor Scheffer and the many faculty and staff who delivered this event that contributed to our College-wide focus on critical thinking. And thank you to so many others who are striving to advance our efforts to help students develop and apply critical thinking skills. You truly make Palm Beach State College a better place to teach and learn.

Cultivating Critical Thinking Dispositions

by Mindy Yale, PSAV Instructor

When beginning to incorporate critical thinking into the course work of most disciplines, the emphasis naturally falls on skill development. The long term goals of teaching these skills include helping students develop habits of thinking that will survive beyond the classroom to support professional success, an ability to intelligently address challenges that may arise in the course of their lives, and the ability to make positive contributions to society through innovation and creative problem solving. Through assessment, questions may arise as to the efficacy of focusing on skills in meeting these long term goals.

Does success on critical thinking assignments indicate that students will use these skills beyond the classroom?

How can we measure the development of students who possess skills but may be reluctant to put the effort into an assignment that represents their skill level?

Is it efficient to focus on skill development without due consideration of the nature of the individuals we are teaching? Through assessment and evaluation of the results, we may discover that the key to unlocking critical thinking lies in critical thinking *dispositions*. To produce students who are both willing and able to think critically, instructional focus must include the cultivation of the affective traits, tendencies and habits of thinking that characterize strong critical thinkers.

What are critical thinking dispositions?

While there are some variations in the words used to describe CT dispositions, there is consensus in the research and educational community that certain intellectual tendencies, attitudes, and values are vital to developing and applying CT skills. In *Thinking Dispositions: A review of current theories, practices, and issues*, Shari Tishman and Albert Andrade (1993) affirm that “Motivations, attitudes, values and habits of mind all play key roles in good thinking, and in large part it is these elements that determine whether people use their thinking skills when it counts.” The APA Delphi Report of 1990 entitled, *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction*, provides a description of the ideal critical thinker which was used to create The California Critical Thinking Disposition Inventory, or CCTDI (Facione, 1990). The CCTDI, currently the only test that has demonstrated strong reliability in measuring CT dispositions, attends to seven attributes of strong critical thinkers. In *Think Critically*, Facione (2011) describes the seven attributes measured in the CCTDI. An abbreviated version of Facione’s description of the seven attributes appears in the following chart:

Truth Seeking	The courage to ask probing questions and to follow evidence; intellectual honesty
Open-minded	Tolerant of divergent views, sensitive to the possibility of one’s own bias
Analytical	Alert to potential problems, anticipates consequences
Systematic	Orderly, focused, and persistent in problem solving, learning and inquiry
Confident in Reasoning	Trusts own reasoning skills to yield good judgments
Inquisitive	Intellectually curious; seeks to learn a wide range of topics
Judicious	The cognitive maturity to realize problems may have more than one solution

Source: Peter Facione (2011): *Think Critically*, New York: Pearson

Are dispositions predictive of critical thinking skills?

In “The Disposition Toward Critical Thinking: It’s Character, Measurement, and Relationship to Critical Thinking Skill,” Facione, Facione, and Giancarlo (2000) report, “Knowing a person’s dispositions allows us to predict, more or less, how the person is most likely to act or react in a wide variety of circumstances.”

When Palm Beach State College’s CT Analytic Rubric was applied to an essay test in the Massage Therapy Department in April, 2012, a strong positive correlation between the attitude and behavior patterns consistently demon-

[continued on Page 9](#)

Trying to get your students to write with better clarity?

Try the “SEEI” method. By Professor Deborah Snowberger

Still wondering how to incorporate critical thinking skills into your teaching strategies? You have read the guide to *Critical Thinking Competency Standards* but just cannot come up with an applicable strategy? Maybe this article contains an idea that can help you get started.

While there are many intellectual standards, the guide lists the most essential ones as clarity, accuracy, precision, relevance, depth, breath, logic, significance, and fairness. For the professors who use material from the Critical Thinking Foundation, these standards have become second nature, so each lecture and each class is infused with at least 12 standards. As professors, our goal is to apply these standards when presenting our course material and to teach these standards to our students. Professors who first examine these standards may feel it necessary to apply all of these standards in each class, so feeling overwhelmed, they place the list aside. The reality is that all of these standards do not need to be used and certainly not all at once. Hence professors should begin with just one, then, add another, and with time, the standards will become integrated into the professors’ teaching methods.

Professors who are familiar with the Critical Thinking Foundation have already heard about the tool for teaching clarity, SEEI (State, elaborate, example, and illustrate), but they may not be quite sure how to apply it. I have been using SEEI in my writing composition course (ENC1101) to teach students to establish clarity in their writing; of course, this tool can be used across curriculum and does not apply only to writing.

I have students apply SEEI to their final drafts. I use the final draft because at this point, they have the ideas together and can now check for clarity. However, I have students telling me now they use SEEI in the brainstorming phase. They find the steps helpful for organizing their ideas.

For the exercise I use in class, I have students look at one of their paper’s body paragraphs and check the topic sentence to make certain the paragraph’s main topic has been *stated*. Students check the topic sentence for grammar, word choice, sentence structure, and for an element of critical thinking. Then students *elaborate* on that topic sentence by stating how, why, what, where, when etc. and expanding it to contain specific details. Once we have checked that the second sentence has provided details to better articulate the topic sentence, students provide an *ex-*

[Continues on Page 7](#)

Congratulations to our QEP contest winners! Students on each campus, and two classes taught by Professors Sophia Munro in Boca and Amy McDonald in Lake Worth, were deemed winners and received cash prizes, bookstore gift cards, and pizza! Visit the [contest webpage](#) for a list of winners!



Professor Amy McDonald
with her winning SLS 1501 section
Lake Worth Campus



Professor Sophia Munro
with her winning SLS 1501 section
Boca Raton Campus

ample or two to show the idea they are trying to express. The students can use an example, anecdote, or scenario to exemplify the paragraph's main idea. At this point the student's paragraph is pretty clear, but to crystalize the main idea, students *illustrate* it by making a connection to the readers' world. Depending on the student's ability, the connection can be made by use of a simple simile, a metaphor, a sentence that relates and the paragraph's topic to the real world, or an analogy.

Once the students have completed their SEEI's, they present them to the class. If direction is needed, I might pose such questions, "I am not clear about your position. Could you state it in other words?" or "Could you give us another example?"

To assess the SEEI exercise, the class and I then check the students' writing for clarity while they present. After each sentence, they pause and the classmates and I check that all steps are correct: Did the student *state* a sound topic sentence? Did the sentence meet the required criteria? Did the student *elaborate* on the topic? Was the topic expanded to contain more specific information and detail? Did the student provide *examples*? Were the examples adequate? Relevant? Effective? Sufficient? Did the students *illustrate* through an analogy? Or a metaphor? Or make a connection? If so, was it effective? Did it create clarity?

Here is a sample body paragraph from an essay about the qualities of love. The use of each component in the SEEI method is indicated parenthetically as that sentence or section begins.

(State) "While bearing the weight of things and hoping for the future only speak of instances of love, the final aspect that defines love is its ability to endure. *(Elaborate)* To be more explicit, love never dies. *(Example)* For instance, my grandparents celebrated their fiftieth wedding anniversary in March 2012 with many of their eighty fostered children surrounding them. Fostering children for over 22, their love for each other and children has allowed them to endure phone calls at 2:00AM, asking if they would take in a Korean baby whose guardian was acting suspiciously at Gatwick airport. Fostering has also required my grandparents to persevere through legal battles, especially when they decided to adopt one child they had cared for many years. *(Illustrate)* As seen here, love is a long-distance run, not a sprint to the finish. Of course there are events that will require a sprint, but also times of rest. The proper pace is part of the art of love

that keeps the long distant vision and dream of love alive."

This SEEI exercise can be applied to each paragraph and thus be used to teach how to write a well-developed essay. Further, one can see how this same exercise could be expanded and varied to cover additional intellectual standards such as accuracy, point of view, breath, logic, significance. While I have shown how to utilize SEEI in writing essays, it can be used across the curriculum—any course that requires students to "state" not just a topic sentence but a definition, concept, problem, theory etc. SEEI serves as a guide for establishing not just clarity but for practicing other intellectual standards.

"Professors who apply the intellectual standards while teaching course content produce strong critical thinking students. Teaching students how to master the skill of establishing clarity prepares them beyond the course content. The good history professor covering the topic of slavery in class may create handouts and Power Points on important facts and even engage students by asking what they know about the material. When and how did the Underground Railroad occur? Students participate and learn the course content. However, when these good professors then apply intellectual standards and direct students how to respond and how to analyze the course content, students not only master the course content, but evolve as thinkers. Those two methods of pedagogy are analogous to a gardener using a rake to till the soil superficially in the spring and using a tiller (machine) to dig down into the rich dark soil in order to produce the best environment for planting."

The key for professors trying to infuse these intellectual standards into their teaching strategies is to start with just one.

Meet Deborah Snowberger



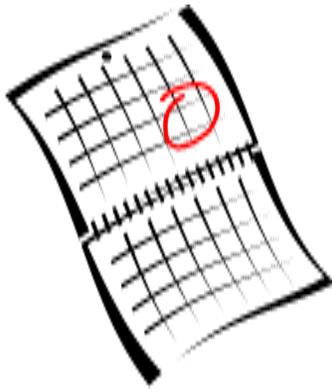
Associate Professor Deborah Snowberger joined Palm Beach State as an adjunct instructor in 2004 and became a full-time faculty member in 2012. A graduate of Julius-Maximilians University Würzburg, Germany, Deborah teaches English composition, American Literature, and German. She completed her first year service on the QEP Implementation Committee and is excited to take on a leadership position with the committee next year.

Deborah has been trying to return her pursuit of a Ph.D., however, fun ventures like teaching a semester at the University of Würzburg in Germany and creating an online German course have set her back. Nevertheless, the Ph.D. is still in sight.

The true cause of the P.h.D. detour is more likely Deborah's endless list of hobbies. She loves skiing, windsurfing, running, learning French, taking dance lessons, reading, hanging out with her teenage twin girls, and spending time in Europe.

Call for Proposals: Academic Development Day 2014-2015

Proposals are now being accepted from Palm Beach State faculty and staff who are interested in presenting a breakout session during the fall or spring Academic Development Day in 2014-2015.



Mark your calendars now!

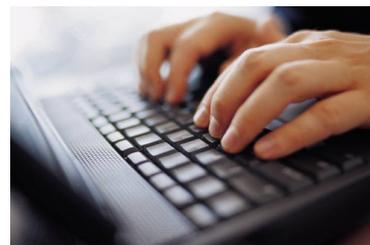
Proposal deadline: September 3, 2014.

[Click here for submission requirements.](#)

To think about...

As you finish out this academic year, how would you say ***you*** have integrating critical thinking in your classroom or other interactions with student? Is it working? How do you know? Will you do anything differently next year?

Online cohort forming now for 2014-2015!



Interested in collaborating with other faculty and staff to discuss and improve teaching and learning, but not sure where to find time to meet on campus? Try the online group! Sample the content by visiting the [Virtual Workshop](#). Contact the QEP manager to be enrolled in this new online professional development opportunity.
QEP@palmbeachstate.edu

strated in the classroom and the outcome of skill assessment was incidentally discovered (Yale, 2012). The essays were graded separately by an instructor within the Massage Therapy Department and a professor on a different campus and from a different discipline with the intention of determining whether consensus would be reached by different graders for each of the learning outcomes on the rubric. The professor had no access to any qualifying information about the students including name, gender or any dispositional information and essays were typed in order to avoid any potential for grader bias based on handwriting. The grading scale determined by each, for each learning outcome on every essay was nearly identical. There were three essays that sparked further discussion and it was subsequently discovered that there was a strong positive correlation between critical thinking dispositions and critical thinking skills evidenced in these essays. The three essays that most clearly reflect this correlation are from the following students:

Student A: disorganized and inconsistent with homework assignments and grades, and who demonstrated some CT skills during oral presentations and classroom discussions, but reflected “hostility” or an unwillingness to demonstrate skills on the essay assignment. In the body of an essay the student broke from the topics several times, including once to identify a lack of confidence in writing due to criticism from past teachers. A disorganized approach, a lack of focus, persistence and confidence in his reasoning and a failure to consider consequences and implications were evidenced in both the writing and in his overall behavior throughout the course.

Student B: held the highest GPA, his classroom behavior reflected a fiercely competitive nature, a refusal to accept the possibility of the validity of opinions, beliefs or values other than his own, and a disregard for consequences and implications of his attitudes and behaviors. His essays reflected a high level of egocentric thinking; an unwillingness to consider any view other than his own and an assertion that statements reflecting his assumptions and biases were factual without requiring any evidence to support them. The

Meet Mindy Yale

Mindy Yale is a Stewart Award recipient and has been teaching anatomy, physiology and complementary and alternative medical modalities in the Massage Therapy Department since 2005. She has been actively involved in the QEP development, advisory and implementation teams and is passionate about critical thinking and assessment practices.



In her quest for success in teaching both critical thinking skills and dispositions, Yale studies and experiments with insights from behavioral economics, learning style inventories, motivational theories and argumentation. For fun, Yale plays with rubrics. Her students consistently score higher on the National Board Certification Exam than most students in the nation.

writing was consistent with his attitude throughout the course.

Student C: had the lowest GPA but scored the highest of all students on the critical thinking essay test. This student had a history of academic challenges but tremendous academic courage. She consistently demonstrated a high level of enthusiasm and engagement in the classroom, an attitude of discovery and wonderment when introduced to new ideas, alternatives or possibilities, an ability to look at a problem from multiple angles, joy in making connections, in pattern recognition and generating solutions, and was eager to investigate and follow where the evidence led. This student was unusually focused, persistent and ego-resilient in both the classroom and on the essay test.

The positive correlation reflected in the essay test is consistent with the outcome of empirical studies conducted by comparing the results of the California Critical Thinking Disposition Inventory (CCTDI) and the California Critical Thinking Skills Test (CCTST) administered to several thousand students. Studies show that students with low disposition scores had low skill scores and high disposition scores were found in students with high skills (Facione, 2011). While formal and informal studies validate the strong link between dispositions and skills, simply reflecting on whether the work of students is consistent with dispositions observed

in the class can yield insight. If efficacy in teaching critical thinking skills requires the cultivation of critical thinking dispositions, it would seem that dispositions must be thoughtfully incorporated into instruction, assignments, activities and assessments. Does it require a complete overhaul of instructional design? Can dispositions really be taught?

Cultivating CT Dispositions

Dispositions are both innate and learned. Inherited personality traits and environmental conditioning factors shape dispositions that support or inhibit critical thinking skill development. One may not inherit the trait of open-mindedness, for example, but can grow up in a family, community or culture that fosters the development of this trait. According to Tishman, Perkins, & Jay (1995), "Dispositions are learned through enculturation rather than direct transmission." This theory requires more than a superficial glance. Prompting students to consider alternative points of view or to ask probing questions and follow evidence is certainly part of disposition training but it may only serve as triggers for those who are either naturally inclined or who feel safe to do so.

In one of the studies conducted with the CCTDI, 587 new college students were assessed, revealing that "entering college freshman students showed strengths in open-mindedness and inquisitiveness, weakness in systematicity and opposition to truth seeking" (Facione, Sanchez, Facione & Gainen. 1995). Why might intelligent people demonstrate *opposition* to following the evidence where it may lead? Quite simply, evidence might go against all that was heretofore believed true, making the student "wrong". Beyond the egocentric tendency to enjoy being "right," people are often afraid to identify their own biases, challenge their cherished beliefs, or question their indoctrination because the results may threaten the reality construct through which they derive a sense of identity or to which they are attached because of the sense of psychological security it provides. People are also commonly afraid to challenge cultural norms, to betray family, to break from the dogma of group affiliations or even to simply look bad in front of others. Social reprisal that has the perceived potential to result in rejection or alienation from the groups one identifies with, belongs to or seeks to belong to, undermine a powerful basic human psychological need. We cannot underesti-

mate the level of risk involved in learning. A culture that fosters critical thinking dispositions is one that encourages risk taking by creating a safe and supportive environment that is necessarily aware and mindful of psychological needs. Creating such a culture may at first seem to be a Herculean undertaking, but certain understandings will provide insight into how even the smallest course modifications can begin to establish such a culture.

Disposition Training and Motivational Theory

At the heart of dispositions is willingness, which is essentially motivation. We have students that at times, and for whatever reason, are completely unmotivated to sit up, let alone employ judiciousness while reasoning. Day after day we work to engage them in the fundamentals of our discipline with varying degrees of success, depending on whether or not we hit the right trigger. There must be sufficient motivation for a student to employ his or her time, attention, effort and skills just as there must be sufficient motivation for us to apply our resources in a persistent endeavor to engage all of our students and support their success. Accordingly, an understanding of psychological needs and motivational dynamics is, in my opinion, the key to creating a culture that fosters dispositions that characterize critical thinkers.

There are many motivational theories and models that may find effective practical application in the classroom, but there are two that I have found to be easily applied in the enculturation of critical thinking dispositions: Deci and Ryan's Self Determination Theory and BJ Fogg's Behavior Model.

Edward Deci and Richard Ryan's Self-Determination Theory (SDT) "describes the socio-context variables that assist and impede human motivation, performance and development" (Deci, Vallerand, Pelletier, & Ryan, 1991). SDT elucidates the difference in impact between extrinsic and intrinsic motivation and focuses on meeting the basic human psychological needs for autonomy, competence and relatedness as the means for enhancing intrinsic motivation. While proven to ultimately undermine motivation, extrinsic motivators that compel behavior such as reward and punishment remain embedded in the culture and communication style of most systems, including education. People who appear to be extrinsically motivated would be characterized as those who are extremely competitive and would do whatever it takes to win the prize or accolades, but it

could be argued that most people are not extrinsically motivated unless there is some intrinsic value. In other words, one who appears to be extrinsically motivated, may be driven by an intrinsic need for acknowledgment, recognition, praise or control. Intrinsic motivation comes from an internal desire to do something because it will provide pleasure, is considered purposeful or meets a personal need. The vast majority of people have been found to be intrinsically motivated and are characterized as triggered to act by the joy of exploration, competence, social relatedness and purpose. This is not to say that intrinsically motivated people do not seek prizes, recognition or status, but the task has to offer them something else or be framed as having intrinsic value in order for it to trigger them to action.

In considering the students previously described from the standpoint of extrinsic and intrinsic motivation, we find that the three students reflect three distinct motivational types:

Student A was neither intrinsically motivated by learning nor extrinsically by grades. The behavior of the student in class and the content of much of his work revealed his key internal motivation to be social relatedness. He had a high level of participation in group activities, classroom dialogues, and demonstrated critical thinking skills during oral presentations but where he did not perceive social relevance, he was disengaged and unwilling to perform.

Student B used the extrinsic motivation of grades as a means to achieve his intrinsic drive to attain status and superiority.

Student C was completely motivated intrinsically in that she was adventurous, took the risk of making mistakes while learning and was undaunted by the possible (and in her experience, likely) extrinsic punishment of a poor grade.

SDT emphasizes autonomy, relatedness and competence as psychological needs that serve as powerful intrinsic motivators. Interest, enjoyment, performance, confidence and success increase when students have the freedom to choose what they do, when they feel valued by others and when they know how to achieve a task and have the ability to perform it. In their article, *Self-Determination Theory and the facilitation of intrinsic motivation, social development and well-being*, Deci & Ryan affirm:

“Conditions supporting the individual’s experience of autonomy, competence and relatedness are argued to foster the most volitional and high quality forms of motivation and engagement for activities, including enhanced performance, persistence and creativity...the degree to which any of these three psychological needs is unsupported or thwarted within a social context will have a robust detrimental impact on wellness in that setting. (Deci & Ryan, 2000.)”

The massive success of Facebook, Twitter, Instagram, Pinterest and other social network platforms reflect the power of relatedness as an intrinsic motivator. No one is compelling anyone to use these sites. Whatever their personality or learning style, all students have a need for acceptance and approval, a need to feel that they are valued, understood, and to feel that they belong in the group they are part of. To enhance relatedness, one might increase the frequency of peer interaction, design activities requiring cooperation, collaboration, and/or peer review while holding a standard of communication that is respectful, open to diverse approaches and points of view and where faculty-student and student-student interaction in some way acknowledges the significance of the individual’s contribution to the group dynamic. Perkins, Jay and Tishman note the significance of relatedness in teaching dispositions: “...dispositions are acquired in precisely the same way that learning is enculturated: through institutional and interpersonal levels of social contact” (1993, p. 17).

If critical thinking is, as Dr. Richard Paul and Dr. Lina Elder (2014, p. 2) describe, “self-directed, self-disciplined, self-monitored, and self-corrective thinking,” a critical thinking culture would necessarily be one that values autonomy. Autonomy can be immediately integrated into one’s instruction or assignments. For example, re-framing an assignment to provide students with autonomy over content, approach, form of expression or all of the above. My most effective assignments are unit “projects” in which the only requirements are that they select a theme from the unit to explore, and that they share their understanding with the class on the due date. Students consistently put a tremendous amount of time, effort, creativity and enthusiasm into projects. Where you cannot provide autonomy, provide greater latitude, assess the results and see for yourself if there is a difference in motivation, responsibility, accountability, and performance. In *Drive: the surprising truth about what motivates us*, Daniel Pink writes, “The opposite of autonomy is control... control leads to com-

pliance; autonomy leads to engagement” (2009, p. 108). Sudbury Valley School is among the most notable models of the efficacy of complete autonomy in education, with 80% of graduates continuing their education beyond their experience in a free and democratic educational culture (Greenberg & Sadofsky, 1992, p. 249.) While Sudbury and other schools that are structurally aligned with self-determination are considered progressive or alternative approaches, SDT has found a home in the multi-billion dollar industry of games.

Why would anyone spend several consecutive frustrating hours tapping away trying to get a flappy bird past a pipe? Or spend thousands of dollars to get five more turns and a color bomb to crush virtual candy? Why are people willing to spend time, energy and/or money to perform activities with no extrinsic reward? SDT states that there is a basic psychological need for the experience of competence and activities that meet that need are seen as pleasurable and increase motivation. Competence is knowing how to perform and having the ability to perform an action that is called for in a specific context. This does not mean the task is easy. BJ Fogg, founder of the Persuasive Technology Lab at Stanford University came up with a behavior model that includes significant insights into successfully providing opportunities for the experience of competence. According to Fogg’s Behavior Model (FBM), ability requires the *perception* of simplicity; simplicity is perceived when one has the resources (time, energy, knowledge, money, skills, etc.) to achieve the task. A student who is capable of writing a 25 page paper, but who is attending school while working full-time and takes care of children or family members, may not have the time or energy to complete the task, even if motivation level is high. If people feel they have insufficient resources, the task is perceived to be too difficult or stressful and motivation drops. Feedback that provides clear and specific information regarding strengths, weaknesses and the next step to be taken is essential to instilling a sense of competence. In the critical thinking classroom, we can structure time to allow for exploration, feedback, reflection and revision on the activities that are incrementally building the skills and the confidence to achieve the overarching goal.

A classroom culture that fosters dispositions, in my opinion, must be one that motivates students intrinsically by attending to the basic psychological needs of autonomy, relatedness and competence. The environment must be safe and supportive for students to take the risks involved in learning to think critically. In teaching dispo-

sitions, our approach would bolster confidence and motivation, encouraging students to think about the way they think without fear of reprisal or ridicule.

Critical thinking empowers our students to navigate their way through issues, situations and circumstances; to come up with reasonable and creative solutions to problems; to fair-mindedly weigh diverse opinions and ideas; to follow evidence and seek truth; to innovate; to consider the long term consequences of their beliefs and actions; to have confidence in their ability to reason, to make decisions and to take action. It’s in everyone’s interest for our graduates to be *willing* to use the critical thinking skills we teach them as people, as parents, as professionals and as members of society. We have the ability and the opportunity to help students develop the habits of thinking that support the willingness to apply critical thinking skills in the world beyond the classroom... if we are willing to think about it.

References

- Bartle, R. (1996) Hearts, clubs, diamonds, spades: Players who suit MUDS. Muse, Ltd., Colchester, Essex. UK. Retrieved from <http://www.mud.co.uk/richard/hcds.htm>
- Deci, E.L. & Ryan, R.M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55, 68-78. Retrieved from: <http://www.selfdeterminationtheory.org>
- Deci, E L., Vansteenkiste, M. & Lens, W. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational Psychologist*, 41(1), 19-31. Retrieved from: http://selfdeterminationtheory.org/SDT/documents/2006_VansteenkisteLensDeci_IntrinsicvExtrinsic_Goal_EP.pdf
- Facione, P. A. (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment, Executive summary, The Delphi Report, Milbrae, CA: California Academic Press.
- Facione, P.A., Facione, N.C., and Giancarlo, C.A. (2000). The disposition toward critical thinking: It’s character, measurement, and relationship to critical thinking skill. *Informal Logic*, 20(1), 61-84. Retrieved from <http://www.insightassessment.com/CT-Resources/Independent-Critical-Thinking-Research/pdf-file/The-Disposition-Toward-Critical-Thinking-Its-Character-Measurement-and-Relationship-to-Critical-Thinking-Skill-PDF>

Continued from previous page

Facione, P.A., Sanchez (Giancarlo), C.A., Facione, N.C. & Gainen, J. (1995). The disposition toward critical thinking. *Journal of General Education*, 44(1), p.1-25. Retrieved from [http://pdfdownloadfree.net/www-insightassessment-com-content-download-789-4985-file-disposition to ct 1995 jge-pdf](http://pdfdownloadfree.net/www-insightassessment-com-content-download-789-4985-file-disposition-to-ct-1995-jge-pdf)

Fogg, B.J., (2009). A behavior model for persuasive design. Stanford University. Retrieved from <http://bjfogg.com/fbm.html>

Greenberg, D., & Sadofsky, M. (1992). *Legacy of trust: Life after the Sudbury Valley school experience*. MA: Sudbury Valley School Press.

Paul, R., & Elder, L. (2014). *The miniature guide to critical thinking concepts and tools*. 7th Ed. Dillon Beach, CA: The Foundation for Critical Thinking.

Peramas, Mary. (2007). The Sudbury School and influences of psychoanalytic theory on student-controlled education. University of Virginia, *Essays in Education*, 19. Retrieved from: <http://www.usca.edu/essays/vol192007/peramas%5B1%5D.pdf>

Perkins, D., Jay, E., & Tishman, S. (1993). Beyond abilities: A dispositional theory of thinking. *The Merrill-Palmer Quarterly*, 39(1), 1-21. Retrieved from <http://learnweb.harvard.edu/alps/thinking/docs/Dispositions.htm>

Pink, Daniel H., (2009). *Drive: The surprising truth about what motivates us*. NY: Riverhead Books.

Tishman, Shari, Jay, Eileen, & Perkins, D.N., (1992). Teaching thinking dispositions: From transmission to enculturation. Harvard University. Retrieved from <http://learnweb.harvard.edu/alps/thinking/docs/article2.html>

Tishman, Shari & Andrade, Albert. (1993). Thinking Dispositions: A review of current theories, practices, and issues. Harvard Project Zero. Retrieved from http://learnweb.harvard.edu/alps/thinking/info_articles.cfm

Wu, Michael. (2011). Unlocking the hidden motivational power of gamification. Video presentation, G Summit, NYC. <http://youtu.be/oEOBi0Ccf3s>

Wu, Michael. (August 29, 2011). What is gamification, really? Lithium blog. Retrieved from <http://community.lithium.com/t5/Science-of-Social-blog/What-is-Gamification-Really/ba-p/30447>

Yale, Mindy, (2012). Palm Beach State College Massage Therapy Department, The senses and perception test. (unpublished).



*About **GASP!***

Palm Beach State College

The idea behind *GASP!* is pretty simple. We all want students to think! As faculty and staff, we appreciate ideas that will make it easier for us get students thinking, and we want to better understand how assessment can help us know we're on the right track. *GASP!* may come in the form of a single fact sheet, a newsletter, or sometimes perhaps, something more journalistic.

The QEP and General Education Committees want to use *GASP!* as a platform to

- ✓ feature faculty and staff who have or are using strategies that help students demonstrate achievement of any of our general education and institutional learning outcomes, including critical thinking;
- ✓ update readers on important issues related to assessment, accreditation, or the QEP;
- ✓ promote College events related to critical thinking, assessment, or professional learning opportunities for faculty or staff that will lead to improved student learning.

If you have any ideas you would like to have featured in *GASP!*, please contact us!

Karen Pain: paink@palmbeachstate.edu

Helen Shub: shubh@palmbeachstate.edu

Who's Who?

General Education Committee	QEP Implementation Team
Dr. Jennifer Campbell	Dr. Caroll T. Capers
Emma Chow	Carleton Chernenkoff
Tcherina Duncombe	Manuel Larenas
Barbara Edgar	Eliana C Mukherjee
Robin Fiedler	Karen Pain, Chair
David Knopp	Deborah Snowberger
Karen Pain	Dr. Kristy Taylor
Dr. Ginger Pedersen	David Wells
Dr. David Pena	Shannon Whitman
Dr. Ana Porro	Elizabeth Wilber
Debra-Anne Singleton	Mindy Yale
Helen Shub, Chair	
Warren Smith	
Melissa Stonecipher	
Patrick Tierney	
Connie Tuisku	



VISIT US ONLINE!

<http://www.palmbeachstate.edu/learningoutcomes/>

<http://www.palmbeachstate.edu/qep>