

WORKSHOP SESSION 1:

Using Instructional Technologies to Facilitate Inquiry in Context

Dr. Duncan Quarless and Dr. Fernando Espinoza

The development of knowledge in general can be categorized in one of several forms. In science education, the "tool" knowledge form is an important form that links all of the others in such a way as to be very significant particularly for developing students who are seeking careers in the sciences. Micro-computer based laboratory (MBL) approaches offer a cost effective alternative to instrumentation for scientific inquiry that would otherwise be out of the reach of most enrichment programs. This workshop will explore the cost effectiveness and instructional efficacy of integrating MBL technology in the enrichment experience. Context, another knowledge form, when combined with the tool form creates the foundations for the experimental design that frames the inquiry-learning process. This interactive workshop/seminar will also explore the paramount importance of the synergies between these two knowledge forms particularly as they provide the means to build knowledge within the other knowledge forms.

Empowering the College-Age Consumer: Model Resources and Programs from the NYS Consumer Protection Board

Mindy A. Bockstein

This session will highlight the notion of collaboration with participating institutions to empower students and staff especially in this economic climate. The CPB, established in 1970 by the New York State Legislature, is the State's top consumer watchdog and "think tank." Through programs, educational outreach, legislation and mediation, the CPB is advocating for and empowering New York consumers.

This full attendee presentation is meant to give an overview of the CPB and the available educational and informational resources the Agency has in its repository and offered to numerous stakeholders and partners to use. These include our life skills project and our "College Tour." The CPB offers four different student and/or staff presentations:

1. Credit Management for New and Transferring Students -This workshop advises students on how to choose and use credit wisely as a 2007 Sallie Mae study found that nearly one-third of college students revealed that, as freshman they were "not at all" or "not very well prepared" for managing their money on campus.
2. Identity Theft Prevention and Mitigation for College Personnel –This workshop is intended for personnel who assist and counsel students. Responders may include CSTEP and STEP administrators.
3. Identity Theft Prevention and Mitigation for Undergraduate Students -This presentation focuses on the basics of preventing identity theft. In addition, it features a step-by-step approach on how to respond to an incident of fraud.
4. Identity Theft Prevention and Mitigation for Graduate Students -This presentation, intended for graduate students, provides background on the crime of identity theft and strategies to prevent falling victim to the fraud. In addition, the workshop provides a roadmap on what to do in response to an incident of identity theft.

Additional on-line resources will be highlighted to demonstrate the importance of information and education in this economy.

Using Social Networks to Promote Engagement in STEM and Career Related Activities

Blanca E. Duarte

The use of Social Networks has become more popular with students over the last few years as the number of these environments on the Internet has increased. As students become more engaged in social networks outside the classroom, the challenge for educators is to find a way to engage students using these tools inside the classroom, while protecting a student's rights and ensuring their safety. This session will introduce participants to several web-based social networks, including NING and the social bookmarking site, DIIGO. Participants will be shown examples of these sites including how they are used around the country to engage students in Science exploration and Career preparedness. Participants will complete a series of questions designed to help them structure their own online environments. They will also be invited to participate in a live social network to explore ways in which to use the tools in their programs.

College Tour Planning 101: An Organized Approach to Planning a Successful College Tour.

Michelle Allevato

College and career exploration is one of the main initiatives of the RIT Science & Technology Entry Program. Giving students the opportunity to visit a variety of college campuses helps them to visualize what *going to college* really means. As Director of RIT STEP, Michelle Allevato has planned three successful college tours for 11th grade students. This workshop will cover the nuts and bolts of planning a college tour including, student eligibility, the itinerary, parent involvement and evening activities.

WORKSHOP SESSION 2:

The Civically Minded and Socially Involved Student

Denessa Loregnard

Now more than ever we are seeing a change here in the United States where our current President and First Lady are pushing for each American to become more civically engaged and serve their country. There are so many programs that are strictly geared to service in America. Teach for America, Service Nation, City Year, etc. the list goes on and on.

Traditionally academic programs focus on preparing their students for academic success with preparation for Graduate School, Professional School and the likes there after. How can we as administrators be the catalyst for change where we can not only prepare our students to professionally succeed as well as having them become the civically minded and socially engaged individuals that we so desperately need in this day in age?

This workshop seeks to challenge each attendee to think outside the box regarding programming. Can current workshops that are being run at your university incorporate the idea of service? Are your CSTEP and STEP students aware of the concept of service? Are you as an administrator aware of the concept of service?

By the end of this workshop, administrators will be given all necessary tools to implement service learning models in their programs. The seed will be planted to create the “beloved community” and the tools will be given to implement this community within their respective programs. Most importantly we will be able to relay the importance of being a civically and socially involved student and citizen to all CSTEP and STEP participants.

The City College of New York Program in Premedical Studies - Verbal Reasoning Workshop

Belinda Smith, Matthew Mead, and Millicent Roth

As the Director of the Premedical Studies Program at The City College of New York, I became aware of the low verbal MCAT scores of my undergraduate student population. Upon review of the medical school application season 2007 and 2008, the average verbal score for CCNY PPS undergraduate students was six (6). This was a concern for me as research indicates that the verbal score on the MCAT Exam is the most significant score, as it determines how successful a student will be in medical school. Because of the volume of readings that are required for medical school, students must demonstrate that they have strong critical thinking and critical reasoning abilities to succeed.

A Verbal Reasoning Workshop was then developed and targeted towards undergraduate students who would be applying to medical school – but at least a year or two away from their application so they would be well prepared. My office received financial support for this endeavor through the Provost’s Office. Administrative support came from Science Advising.

The goal of the Verbal Reasoning Workshop is simple: to provide students with the tools they will need to improve their critical thinking and critical reasoning skills. Matt Mead, an Adjunct Instructor of English here at CCNY, designed the course structure. It is designed around an effective, commonsense

approach to the MCAT verbal section, using topical exams, verbal exercises and discussions of test strategies. Students were also required to read and analyze four articles using our discussed techniques. The lectures for the course drew heavily, if not exclusively, from the book *MCAT Verbal Reasoning 7& Mathematical Techniques (7th Edition)* by Jonathan Orsay. A reader was prepared for students and taken from various sources including *The New Yorker*, *The New York Times*, *Wired*, *Science*, and *The Best American Science and Nature Writing*.

Students would also:

- be familiar with strategies and tactics
- effectively answer the questions
- easily identify the main idea
- know how to study for the verbal reasoning section

The idea would be that students would register for the Verbal Reasoning Workshop during the summer and winter break, so as to not interfere with their coursework during the academic year. In addition, students would participate in the Verbal Reasoning Workshop each summer and winter break until their application year, continuing to strengthen their skills along the way.

Undergraduate students were identified based upon their year in school with the focus being on freshman and sophomores. The workshops would run for two weeks during the summer and two weeks during the winter break, for three hours each day, four days each week.

The results of the summer 2008 workshop are that of the eight students who completed the workshop, saw their pre-test Verbal score improve nearly two points after three weeks of instruction. For the winter 2009 workshop, of the seven students who completed the workshop, saw their pre-test Verbal score improve, on average, of 4.14 points. This is significant give the short time frame in which they prepared.

Assessing Impact for Guided Inquiry in Context

Dr. Fernando Espinoza & Dr. Duncan Quarless

An investigation of the use of inquiry-based tasks as the primary mode of learning science within a thematic approach that incorporates mathematics, science, and microcomputer-based laboratory technology in activities correlated to the New York State standards to enhance learning experiences. Activities were designed to involve students in two major contexts for their experimental work: forensic science investigations, and environmental science issues. The core of our project consisted of an analysis of students' proficiency in dealing with discipline-specific content, and of their development of critical thinking process skills. The analysis of the normalized gain in content proficiency is based on assessments of performance using a standardized multiple-choice test consisting of regents-type questions, and administered before and after the experimental tasks were conducted on the same days.

The assessment model uses a 'normalized' gain (a measure of the fractional improvement of a given group as a whole) $h = (\%post - \%pre) / (100 - \%pre)$. The data collected from the pre and post treatment measures content knowledge as a summative type of assessment. Positive variable although sustained measures of gain were observed in 95% of the activities undertaken by the students, and significant improvement in content performance gain was observed in nearly half of all activities undertaken.

The assessment of the development of process skills was based on an analysis of two meta-cognitive features of critical thinking-the students' ability to predict the outcome of an experiment, an essential

inquiry skill, and their reflections on the experimental results. A rubric developed with dimensions in accordance with Bloom's taxonomy to probe for evidence of proficiency development of such skills was used as a formative type of assessment. Results show a statistical significance to the relationship between the consistency in the performance on a given process skill, and the amount by which it is seen to improve. The gains are most noticeable in those skills that involve the student in meta-cognitive processes: inferring, formulating hypotheses, interpreting data, identifying and controlling variables, and predicting.

The results indicate that having laboratory experiences that are exploratory and thematic helps students to develop the necessary critical thinking skills needed to succeed in future science courses, and effectively addresses the need for better preparation to develop scientific literacy.

Guidelines That Work For You: Supplementing the CSTEP Field Manual

Reena DePaolo and Tykeia Robinson

With so many new faces joining the C/STEP family recently there has been a growing need for some additional support or training to manage our programs. As staff come and go there should be some reference on the program's overall goals & objectives and day to day operations that remains constant. This workshop will help program administrators to develop guidelines to supplement the Field Manual provided by SED. These guidelines should provide enough information to get new staff started without overwhelming them. While the workshop is geared towards CSTEP, the information is general enough to apply to STEP also.

Improving the STEP/CSTEP Reporting Process

Drake Harrison

If it hasn't happened to you, it's happened to someone you know. Somewhere at sometime you will be tasked with handling reams of information and submitting it in a format that could be, let's just say – "very challenging"! Or, your task is to input that data into a format that ultimately turns out to be problematic. You may even have been charged with developing your own STEP/CSTEP database system.

Representatives from CSTEP at Onondaga Community College will conduct a round table discussion that will include a look at problems inherent with completing and submitting STEP and CSTEP Final and Mid-Year reports. The panel discussion will include:

- Internal processes for storing data and generating Final and Mid-Year reports using Microsoft Access.
- Creation, expansion, or modification of the database; addition, deletion, storage of information about the database structure; security; and other useful operations.
- How this living Database Management System (DBMS) is robust and provides more functionality for working with our campus-wide system (Datatel).
- Managing internal data and creating queries on the fly and improving accuracy in reporting.
- How or should CSTEP/STEP move forward with an **online** reporting structure?

After an initial discussion, we hope to open the floor for questions.

WORKSHOP SESSION 3:

Decoding Medical School Admissions: An Insider's Guide to the Application Process

Nakeia Chambers and Eberle Schultz Bassani

Applying to medical school is a daunting task, and as pre-health advisors, your students turn to you for the answers. This workshop will focus on the pre-med advisors' role in the advising and application processes. We will cover the complete application experience, from first semester freshman to medical school applicant, including:

- Pre-Medical requirements, including which classes are “must takes”, and which are recommended;
- The MCAT;
- The AMCAS application, what to highlight, what to not;
- The impact MCATs and GPA have on acceptance;
- How to advise the ‘tough’ students;
- Post-Bac programs;
- Insider tips for advisors;
- Helpful resources for you and your students; and
- The advisors' role in increasing diversity in medical school.

We hope that you will join us for an enlightening workshop and come away with tips for your students that will give them an edge.

Choosing and Using Credit Wisely

James Dees

To assist economically disadvantaged and underserved students, and to enable administrators to assess the value of the Consumer Protection Board's presentations, this workshop would highlight key elements of our “College Tour” presentation. Since 1 in 4 college students leave school with over \$5,000 in credit card debt, this presentation provides both online and offline prevention tips relevant to that demographic group. Students report that complex offers for credit constantly flood their mailboxes and e-mail accounts, creating an atmosphere that may lead to financial missteps. A 2007 Sallie Mae study found that nearly one-third of college students revealed that, as freshman they were “not at all” or “not very well prepared” for managing their money on campus. This workshop advises students on how to choose and use credit wisely.

In addition, this presentation focuses on the basics of preventing identity theft and it features a step-by-step approach on how to respond to an incident of fraud. Because 30% of all reported instances of identity theft are from victims under the age of 30, this workshop is relevant to college-age consumers.

Strategies for Increasing Success in a CSTEP Program

Dr. Henry Teoh and Monique A. Clark

The CSTEP program at the State University of New York-College at Old Westbury has provided summer and academic year programs since its inception. In spite of the small size of the college and college enrollment of about 3,000 students, the program exceeded its targeted number recruiting three hundred and eighty students. This workshop will explore successful strategies for recruiting, supporting, and retaining students, helping them to remain focused on CSTEP careers.

Insight on Developing a Successful STEP Parent Group

Gwendolyn Clarke and Marva Richards

The session presenters will lead participants in a discussion on developing a successful parent group for STEP programs. The goal of the session will be to motivate, encourage and inspire participants to create an approach to parent groups focused on "Parent Development". We hope to discuss the needs of individual STEP programs and their parent populations as these needs relate to the overall mandate of STEP. Participants should come away from the session with a process for forming and cultivating a parent group.

The Luck of the Draw: Playing the Hand You Are Dealt

Carol Kissam

What do we really know about the cultural and ethnic diversity of the students we serve – or even about one another? This experiential workshop is designed to help us understand unique aspects of our students and us and the stereotypes that prevail. The round table (debrief) sessions after this card party activity generally produce some very rich conversations and better understandings. Many walk away transformed in some way.

WORKSHOP SESSION 4:

Changes to the PSAT and SAT

Michael Cronin

Presented by Michael Cronin of the College Board, this session will provide useful information on the upcoming changes to the PSAT and SAT exams.

STEP/CSTEP Collaboration: The STEP Junior List

Cecelia Russo and Sean Partridge

This spring, NYSED and the statewide staff advisory group instituted an initiative aimed at improving the information sharing between STEP and CSTEP programs. The goals of this project were to enhance the collaboration of STEP and CSTEP and to increase the number of STEP students pursuing degrees at CSTEP institutions.

The pilot year has shown tremendous potential. Our hope is to continue these efforts in the coming year and to increase both the number of STEP programs participating and the number of CSTEP programs actively and creatively reaching out to our STEP juniors.

This workshop will focus on sharing ideas to assist the STEP and CSTEP administrators to enhance the initiative.