

Faculty Newsletter

BROOKLYN COLLEGE

Volume XVII Number 1

We Are Dedicated



Faculty Reflections on Team-Based Learning at Brooklyn College

This past fall semester, students in 32 sections across 16 different departments were engaged in Team-Based Learning (TBL), a form of collaborative learning that incorporates a specific sequence of individual work, team (group) work, and immediate feedback. TBL increases students' understanding of course concepts by getting them to solve authentic, real-world problems and helping them to develop their workplace learning skills. This reflects a paradigm shift, whereby the main course objective moves away from transmitting content (via lectures) to helping students learn how to use course content to solve significant problems.

The main elements of TBL are: 1) strategically-formed, permanent student teams; 2) a curriculum organized through backward design into five to seven large units; and 3) peer evaluation. Each unit begins with a structured readiness assurance process. This process gets students to read and engage with the prerequisite material(s) necessary for each curricular unit and assesses the students individually and in teams for their understanding of that material. Each unit culminates with application activities that require the teams to make complex decisions incorporating and utilizing that unit's core concepts (Larry K. Michaelsen and Michael Sweet, "The Essential Elements of Team-Based Learning" http://online.library.wiley.com/store/10.1002/tl.330/assef/330_fhp.pdf?v=1&t=hrOw4301fs=7f53391e2f5b4d508cdfb012b982367052b604d). The key to the effectiveness of TBL's group application activities, which form the heart and main focus

of each unit, arises from requiring the teams to address the "4 S's":

1. work on a significant problem that demonstrates the relevance and usefulness of the unit's concepts;
2. make a specific choice among clear alternatives;
3. engage with the same problem as all the other teams, so that each team cares about what the other teams have concluded and are invested in their rationales for doing so; and
4. simultaneously report their decisions and answers, so differences among the teams' responses can be probed, explored, and exploited for maximal learning and instructional effect (Larry K. Michaelsen, "Three Keys to Using Learning Groups Effectively" <http://www.iub.edu/~tchsoit/part3/Michaelsen.pdf>).

The Library hosts The 22nd Annual Author's Book Party

Tuesday, April 29, 2014 from 12 pm — 2 pm

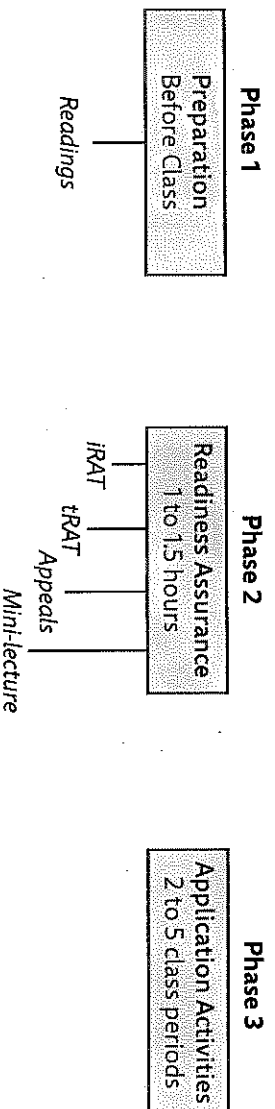
Please join us in honoring Brooklyn College authors who have published a book in the past year. The honorees and the entire faculty and professional staff are invited to a luncheon and presentation in the Library's Christoph M. Kimmich Reading Room.

Any questions? Write to librarybookparty@brooklyn.cuny.edu

Contents

Faculty Reflections on Team-Based Learning.....	Pg. 1
Faculty Notes.....	Pg. 13
Collaborations.....	Pg. 26

What is a typical TBL unit?



(Adapted from Jim Sibley's "What is TBL?" http://www.teambasedlearning.org/Resources/Documents/TBL_20Handout%20Aug%2016-print%20ready%20no%20branding.pdf)

The TBL sequence is as follows:

Phase 1 — Preparation: Students complete readings and assignments for each unit before the class.

Phase 2 — Readiness Assurance: At the beginning of each unit, the students are given a Readiness Assurance Test (RAT), which is closed-book and measures their comprehension and mastery of the assigned readings and helps them deepen their understanding of the course material needed to begin problem solving in Phase 3. Once the test period is over, the instructor may present a short mini-lecture to clarify concepts that are not well understood as evidenced by test scores. The purpose of Phase 2 is to ensure that students and their teammates have sufficient foundational knowledge to begin learning how to apply and use the course concepts in Phase 3.

- **Individual RAT (iRAT):** Students individually complete a multiple-choice test based on the readings.
- **Team RAT (tRAT):** Following the iRAT, the same multiple-choice test is re-taken with their team. These tests typically use a lottery-style scratch-off card. The students develop a consensus with their teammates, and then scratch off the opaque silver coating hoping to reveal a star

that indicates a correct answer. For tests with four response choices, the team is awarded 4 points if they uncover the correct answer on the first scratch, 2 points for the second scratch, and 1 point for the third scratch. If they are incorrect with any scratch, the team needs to reconsider, discuss, and make another decision.

- **Appeals Process:** Once the team has completed the team test, they have the opportunity to fill out an appeals form, which allows the team to identify questions where they disagree with the wording of the question or with ambiguous information in the readings. The instructor reviews the appeals outside of class time and reports the outcome of the team appeal at the next class meeting. Only teams are allowed to appeal questions (no individual appeals).
- **Feedback and Mini-Lecture:** Following the RATs and Appeal Process, the instructor provides a short, clarifying lecture on any difficult concepts.

Phase 3 — Application Activities: The majority of instructional time is spent on application activities, whereby the students and their teams use the foundational knowledge, acquired in the first two phases, to make decisions. The students engage in intra-team and inter-team discussion regarding the problem-based activities. Teams report out their decisions using a variety of methods, such as colored cards indicating a specific choice; alternatively their responses

Faculty Reflections on Team-Based Learning at Brooklyn College

might be written on small whiteboards or on poster boards (*Jim Sibley, "Student Orientation to TBL,"* <http://list.olt.ubc.ca/cgi-bin/wa?A2=ind1108&L=TEAMLEARNING-L&P=494>).

The Team-Based Learning Academy

Under the auspices of the Roberta S. Matthews Center for Teaching, the Team-Based Learning Academy (TBLA; <http://bctbl.edublogs.org/>), which is supported by a grant from the CUNY Office of Academic Affairs, takes faculty through the process of transforming a traditional course into a TBL course. TBLA is training three cohorts, in total, 63 faculty — over the course of three semesters: spring 2013, fall 2013 and intersession during January 2014. See Table 1 for a list of faculty participants in each cohort.



Table 1

Faculty Participants Cohort 1 — Spring 2013

- o Jeanne Angus, *Childhood, Bilingual, & Special Education*, School of Education
- o Elisabeth Brauner, *Psychology*, School of Natural and Behavioral Sciences
- o Joe W. Burden Jr., *Kinesiology*, School of Natural and Behavioral Sciences
- o Douglas Cohen, *Music*, School of Visual, Music, and Performing Arts
- o Maria Contel, *Chemistry*, School of Natural and Behavioral Sciences
- o Christopher Dunbar, *Kinesiology*, School of Natural and Behavioral Sciences
- o Tiffany K. Duncan, *Finance and Business Management*, School of Business
- o Graciela Elizalde-Utrick, *School Psychology, Counseling, & Leadership*, School of Education
- o Akiko Fuse, *Speech Communication Arts & Sciences*, School of Humanities and Social Sciences

- o Yu Gao, *Psychology*, School of Natural and Behavioral Sciences
- o Michael Goyette, *Classics*, School of Humanities and Social Sciences
- o Margrethe Horlyck-Romanovsky, *Health & Nutrition Sciences*, School of Natural and Behavioral Sciences
- o Ronald O. Howell, *English*, School of Humanities and Social Sciences
- o Herman Jiesamfoek, *Early Childhood & Art Education*, School of Education
- o Lawrence Johnson, *Sociology*, School of Humanities and Social Sciences
- o Sandra Kingan, *Math*, School of Natural and Behavioral Sciences
- o Charlene Kohler-Britton, *Early Childhood & Art Education*, School of Education
- o Natasha LaMont, *Biology*, School of Natural and Behavioral Sciences
- o Sharona A. Levy, *SEEK*, School of Humanities and Social Sciences
- o JoAnn Luhrs, *Classics*, School of Humanities and Social Sciences
- o Jane E. Palmquist, *Music*, School of Visual, Music, and Performing Arts
- o Suklima Roy, *Wolfe Institute/First College Year/ Psychology*, Office of the Associate Provost for Academic Programs & School of Natural and Behavioral Sciences
- o Brian Sowers, *Classics*, School of Humanities and Social Sciences
- o Rachelle J. Suissa, *Political Science*, School of Humanities and Social Sciences
- o Micha Tomkiewicz, *Physics*, School of Natural and Behavioral Sciences
- o Robert Viscusi, *Wolfe Institute/English*, School of Humanities and Social Sciences
- o Ellen Walker, *Psychology*, School of Natural and Behavioral Sciences
- o Sybil White, *SEEK*, School of Humanities and Social Sciences

Faculty Reflections on Team-Based Learning at Brooklyn College

Cohort 2 — Fall 2013

- o Cheryl Carmichael, *Psychology*, School of Natural and Behavioral Sciences
- o Hao-hsuan (Holly) Chiu, *Finance & Business Administration*, School of Business
- o Baila Epstein, *Speech Communication Arts & Sciences*, School of Humanities and Social Sciences
- o Lauren Grace Kilroy Ewbank, *Art*, School of Visual, Music, and Performing Arts
- o Lea Fridman, *English*, Kingsborough Community College
- o Louise Hainline, *Psychology*, School of Natural and Behavioral Sciences
- o Gail Horowitz, *Chemistry*, School of Natural and Behavioral Sciences
- o Amy E. Hughes, *Theater*, School of Visual, Music, and Performing Arts
- o Yoon-Joo Lee, *Childhood, Bilingual, & Special Education*, School of Education
- o Michael Meagher, *Secondary Education*, School of Education
- o Sharon O'Connor-Petuso, *Childhood, Bilingual, & Special Education*, School of Education
- o Kristina Riemer, *Psychology*, School of Natural and Behavioral Sciences
- o Alma Rubal-Lopez, *Childhood, Bilingual, & Special Education*, School of Education
- o Florence Rubinson, *School Psychology*, *Counseling, & Leadership*, School of Education
- o María R. Scharón-del Río, *School Psychology, Counseling, & Leadership*, School of Education
- o Abe Tawil, *Finance & Business Management*, School of Business
- o Laura Tesman, *Theater*, School of Visual, Music, and Performing Arts
- o Sharon Vaneik, *Finance & Business Management*, School of Business

Cohort 3 — Intersession, January 2014

- o Edna Asknes, *Nursing*, Borough of Manhattan Community College
- o Jennifer Ball, *Art*, School of Visual, Music, and Performing Arts
- o Jean Bertho Derival, *Modern Languages and Literatures*, School of Humanities and Social Sciences
- o Candida Brooks-Harrison, *Childhood, Bilingual & Special Education*, School of Education
- o Eliza Dragowski, *School Psychology, Counseling, & Leadership*, School of Education
- o Mona Hadler, *Art*, School of Visual, Music, and Performing Arts
- o Paul McCabe, *School Psychology, Counseling, & Leadership*, School of Education
- o David McKay, *English*, School of Humanities and Social Sciences
- o Emily Molina, *Sociology*, School of Humanities and Social Sciences
- o Min Nakarmi, *Physics*, School of Natural and Behavioral Sciences
- o Kosal Path, *Political Science*, School of Humanities and Social Sciences
- o Wayne Powell, *Earth and Environmental Sciences*, School of Natural and Behavioral Sciences
- o Dena Shottenkirk, *Philosophy*, School of Humanities and Social Sciences
- o Malka Simon, *Art*, School of Visual, Music, and Performing Arts
- o Sophia Suarez, *Physics*, School of Natural and Behavioral Sciences
- o John Van Sickle, *Classics*, School of Humanities and Social Sciences
- o Michelle Wang, *Business Management*, Borough of Manhattan Community College

Faculty Reflections on Team-Based Learning at Brooklyn College

During the spring 2013 and fall 2013 semesters, the faculty attended training workshops approximately two Fridays per month that provided direct experience of the various facets of TBL. During January 2014, we offered a four-day Intensive Training Institute for Cohort 3 faculty. With support from the TBLA trainers (Suklima Roy, Sharona Levy, and Graciela Elizalde-Utrick), the faculty reconceptualized their courses. This article highlights the reflections of some of the members of the first TBL cohort, who trained in spring 2013, redesigned their syllabi over the summer, and implemented TBL methodology in the fall 2013 semester.

Reflections from TBL Faculty from the School of Business

Tiffany Duncan, Finance and Business Management: I am an adjunct instructor, and the first course I implemented TBL in was "Strategic Human Resource Management," BUSN 3240, which took place on Thursday nights from 6:30pm-9:30pm. My students and I come from working all day, have class all week and head home to families afterward and are back at work by 9am. My students loved TBL as it kept them engaged in their learning! In addition, it restored their faith in teams. Many students worked harder as they wanted to add value, which pushed them to be better, thereby learning more. For this course, I chose to create assignments and readiness assessment tests based on real case studies. This made for assignments that were interesting and relatable as they were based on familiar organizations or situations.

A memorable case was one where an organization downsized by closing one entire office. The assignment was to decide if the team agreed with the decision to downsize; if so, then how, when, and who would be downsized? If the team did not agree to downsize, what would the other course of action be – retraining, job

sharing or other measures of cost cutting? It was interesting to hear the diverse patterns of thought that led to each response being selected by a team. The assignments built team loyalty, and also increased the students' desire to listen to each other. Overall, this has been a great experience for my class and me. The energy in the classroom was unparalleled and most importantly the class grasped the content. In addition, TBL provided my working students with networking opportunities they felt they had missed out on previously. For this we are grateful.

The School of Education

Jeanne Angus, Childhood, Bilingual, and Special Education: TBL has been an exciting challenge from many different perspectives. I was eager to begin using it but too pressed for time to implement it full-bore by summer session. So I used a variation on the readiness assurance process for my course "Introduction to Students with Special Needs," CBSE 7503X. My feeling was this would at least guarantee students would buy and read the material assigned and be better prepared to participate in the group activities. Students were actively engaged (and prepared) for the daily three-hour summer class, always on time and eager to see what they were going to be doing. No one closed his/her eyes or used phones the entire time. The groups were engaged and actively contributing ideas and discussion, while peers listened and considered. Students cooperated with one another and several said it was either the first time they had liked working in a group and/or could see a value to it. The format of doing the work in class contributed immensely to that determination. A casual survey taken at the end of the course showed greater than 70% felt positive about the class format and 80% felt they had gained valuable information that they knew how to immediately implement. Some stated it was the best class they had had at Brooklyn College, even if it was their last.

Faculty Reflections on Team-Based Learning at Brooklyn College

The 'full-bore' implementation of TBL in the fall semester was not only a challenge and a continuing work-in-progress, but a tremendous investment of time and mental energy and a cause for much angst. This time the course I implemented TBL in was "Action Research," CBSE 7657, a graduate capstone course compressed from a two-semester format into one. Fortunately one chapter in *TBL for Social Sciences* (Stylus, 2012) presented an almost identical situation that I could use as a model. Each team identified its own relevant classroom issue under the umbrella theme of Data-Based Problem-Solving, and had to engage in researching the selected issue, creating interventions and analyzing outcomes. The RATs triggered a great deal of discussion and the accompanying applications resulted in diverse answers and solutions from the various teams. The semester end came faster than I would have liked, for a better sense of full completion, but feedback from most of the students was positive, with most students identifying the process and amount of work accomplished as outcomes they valued.

For myself, I remain very enthusiastic about the philosophy of 'using new knowledge in relevant applications' and support that growing trend throughout education. I am pleased when I hear my students exchanging with peers how they could use this same format to engage their high school students. But my serious take-away from these past two semesters is that I need to be very sure of my goals and the desired student outcomes. This became very apparent when I was critiqued for my lack of supervision or intervention with a group observed to be 'less focused and productive, appearing to not know what they should be doing'. To my observation, these students were struggling to define their roles and levels of cooperative interchange and they needed to recognize that for themselves.

I had to repeatedly re-examine exactly what I wanted them to gain from the semester's experience. Was it producing a good looking graduate level paper or was it reaching a level of professional development that would allow them to benefit from what others could contribute to their learning? This is yet to be determined.

Graciela Elizalde-Utrick, School Psychology, Counseling, and Leadership: The TBL Initiative has been an amazing, enriching, and transformative experience for me both as an educator and learner. During the spring 2013 semester, our TBLA Fridays (what I fondly called our training days) were invigorating. At first, the thought of losing precious writing time made me apprehensive. However, very quickly, I looked forward to joining my teammates. So many times I would find myself looking around at our four teams of faculty, and I would be awestruck. How often can one say that one is at a Brooklyn College meeting that is so transformative? I was struck repeatedly by our intra- and inter-team discussions and debates; I very quickly bonded with this diverse group of faculty. Doug (Music) once entered the room saying that he could hear us all the way down the hall! Yes, we were a boisterous lot!

Like some of my colleagues, I partially implemented TBL over the summer in the "Seminar in Bilingual School Counseling," SPCL 7823, in an effort to practice some of the procedures. My intent was to do only one application exercise. But that changed very quickly and I wound up including application activities in every class session. It was amazing to see the students so engaged. In stark contrast, when I deviated from TBL and lectured for only about 45 minutes (and I am capable of lecturing for up to six hours, as I have in a course typically run on Sundays), I recognized the tell-tale signs of saturation — the glazed-over eyes and brains turning into mush, as

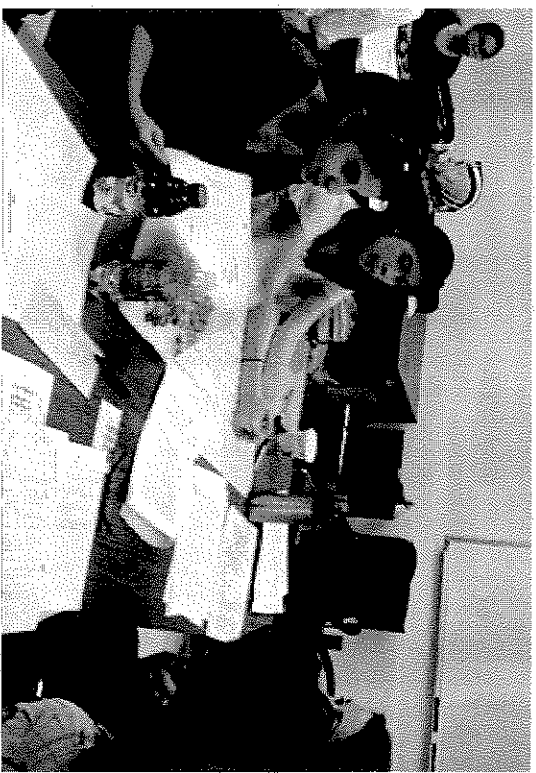
Faculty Reflections on Team-Based Learning at Brooklyn College

the nearly four-hour class went into the evening. I realized at that moment that I would not return to traditional teaching, particularly for this and other similar courses.

This fall semester I fully implemented TBL in “Instructional Interventions in Schools,” SPCL 7906, and I experienced the great challenge of my multiple roles: Both TBL participant and trainer for Cohorts 1 and 2 in the fall and Director of the Center for Teaching. Over the summer, I managed to prepare the first five weeks of class material. It was an enormous undertaking. All the work for TBL is upfront — it takes hours to develop RATs, and even more time to develop the application activities. It easily would take an entire weekend to prepare just one week’s materials. But it was worth it. The implementation is so enriching. Furthermore, like the students who apply the material on a deeper level, I too had thought more deeply about the course material, as I had to develop higher-level activities, compared with just lecturing and facilitating discussion. I do not mean to minimize traditional teaching. However, I, myself, reached a higher level of engagement with the material as I created TBL activities that conformed to the 4 S’s (see above). The students were highly engaged, although they sometimes commented that they would have liked me to tell them the answers — they wanted to hear it from me, they would say. They didn’t seem to trust that they could come up with the answers. And yet, team performance repeatedly showed me that they did in fact reach much deeper levels of thinking and application than in previously taught sections of students.

Herman Jlesamfoek, *Early Childhood and Art Education*: This fall semester, I started my historical foundations class “Critical Historical and Current Issues in Art Education: Social Values and Individual Needs,” ECAE 7507, with several new challenges and many unanswered questions. Even though I had spent my whole summer

reading TBL material and preparing applications and RATs for this class, it felt like I was pushed to jump into a dark bottomless lake. I took a deep breath and this is exactly what I did. I closed my eyes and jumped; I had, after all, committed to try this TBL approach in the art education class. The first challenge that I encountered was that I had no idea how long the applications and RATs had to be. As a consequence, I was not sure how much time to plan for my class activities. Another challenge was that this course was heavily literature-based, and I did not feel that I could easily adapt it to a TBL approach. I knew that I did not want to let go of any of the readings, since,



Students in “Instructional Interventions in Schools,” SPCL 7906

Photo: Elizalde-Urnick

in my opinion, these allowed the students to gain a strong and rich perspective and overview of the historical past and current issues of the art education field. In previous classes, I had the students write syntheses, and defend and discuss their particular positions. The discussions that we now had in this TBL class were different and in my preliminary estimation a bit deeper and more focused. Regarding assigned readings, I still recognize the same student behavior as in the class that I taught in a non-TBL way in the past,

Faculty Reflections on Team-Based Learning at Brooklyn College

except that students who did not do the readings could not hide so easily in the back of class. These students quickly found out that they were individually responsible for their own preparatory reading, and that a subjective, emotional, non-informative input was not sufficient to hold up an argument in the discussions. A nice outcome from this TBL approach is that it often led to various outputs of wonder, surprising insights, laughter, and fun.

An issue that perhaps is particular to the cohort nature of the art program is that the students are used to interacting readily with each other and now have become competitively team-oriented. In our seventh class meeting, some students jokingly remarked that they hardly spoke to the other team members anymore. I understood their reaction since I had a similar experience in my own faculty TBL workshops that were set up in the same TBL team way. Another challenge, also specific to this class perhaps, is

that this year the class size was smaller than the usual 18 to 20 students. This was due to issues beyond the program's control. The class thus ended up with only two teams of five persons each. Although I do not yet have the experience of teaching this TBL approach to a large group of five or six teams, I imagine that with a larger group the class discussions could get more intense. With only two groups, I found that the students too easily accepted each other's positions non-critically.

TBL takes an enormous amount of preparation, at least in the beginning. During class, however, it did allow me moments where I could "let go" and listen, observe, and notice class details that would normally have escaped me. I suddenly became aware of particular habits and patterns in students' thinking and arguing style and how they positioned themselves and reacted in unusual, unfamiliar situations, often challenged by unknowingly slipping into anachronistic modes of thinking.

Overall, I am grateful for this opportunity to engage in and evaluate the value of TBL for teaching and learning in our arts education program.

Charlene Kohler-Britton, *Early Childhood and Art Education*: As someone who came to the workshops for TBL with a very open mind, I was an absolute convert after the first meeting. The idea that my group work with students could be elevated to where I had always hoped it would go and never quite did was exciting to me, especially as my field is early childhood education. As in all fields of study, the field of early childhood depends primarily on building relations with others. TBL truly allows students to experience, in-depth, what it means to be part of a community that utilizes everyone's resources in the most effective and significant way. The planning time for TBL is quite challenging; and while I cannot say that the planning comes easily (it doesn't) and



Students in "Critical Historical and Current Issues in Art Education: Social Values and Individual Needs," ECAH 7507. Photo: Jeannefock

Faculty Reflections on Team-Based Learning at Brooklyn College

is less time consuming than traditional planning (it isn't), the application of what is planned and how the students engage in the course content makes up for that. Therefore, I must say after this first semester of using TBL in my course on "Early Childhood Education Foundations," ECAE 2004, I continue to be smitten.

The School of Humanities and Social Sciences

Akiko Fuse, *Speech Communication Arts and Sciences*:

Learning about TBL was an eye-opening experience. I partially implemented the approach for an undergraduate course, "Speech and Language Development," SPEC 2221, last summer and fully implemented the approach for the course this past fall semester. Additionally in the fall, I partially implemented the approach for a graduate course. I normally lecture while providing supplemental materials such as PowerPoint slides, handouts, video clips, and audio samples. However, in my TBL class, there was no lecture or PowerPoint slides except for when reviewing some challenging material from the tRAT. This is not only a new approach for me but also for the students. Unsurprisingly, I saw worried faces at the beginning of the semester. In the TBL class, I was able to devote more time to practice applying the concepts that were introduced in the readings. Many of the students in both undergraduate and graduate programs hope to become clinicians in the near future. Implementation of this approach allowed me to spend time on creating applications, which involved my students engaging in problem solving activities and discussing issues for particular clinical cases. And I hope that this would help to develop informed clinical opinions that are critical in a real work setting. As the semester came to an end I no longer saw the worried faces in class. Rather, it appeared team-based application activities stimulated and deepened the students' critical thinking.

JoAnn Luhrs, *Classics and SEEK*: Although initially I was skeptical about how TBL would work with a SEEK community, I have been pleasantly surprised at how the students adapted to this new approach. They have learned to read their assignments more analytically and to think more critically. This fall I taught two sections of "Classical Cultures," CLAS 1110 — one as a TBL experience and the other as a lecture — and I could see the difference in the students' learning. The students in the TBL course appeared to gain much more from their TBL experience than the lecture course students. Not only did the team experience help them see that there is great value in the views and insights of others while learning but also the structure of the course allowed for deeper learning of the subject for students. I intend to use the TBL method in all future courses.

Rachelle J. Suissa, *Political Science*: I am an adjunct instructor, and I worked TBL into my course "Introduction to American Government," POLS 1001, this fall semester with students from the STAR Program at Brooklyn College. In previous semesters I did very little group work with the students. But this fall, they had 10 iRATs/tRATs and at least five application activities, including a debate on gay marriage, political science jeopardy, which we did as a review for the final exam, and other assignments. I really enjoyed doing the group work with them, because it was a strong indicator of how they improved as a class. Their performance on the iRATs wasn't always so great overall, but once they paired up in teams to do the activities, they did much better. They learned consensus building skills, how to work together to find an answer, and most importantly, how to evaluate one another as teammates. And that's extremely important. I would definitely recommend TBL to other professors at Brooklyn College, especially those who are teaching in the STAR and College NOW Programs.

Faculty Reflections on Team-Based Learning at Brooklyn College

Sybil White, English and SEEK: I wasn't sure how TBL would work in my classroom when I decided to use the methodology in my Freshman "English Composition I," ENGL 1010, class this fall semester. My hope was that by using TBL, my students would do more in-depth analysis of the assigned reading material, which would help them write well thought-out essays. I could not have been more surprised with how well TBL worked in my class. The students loved working in teams. They had very heated discussions about the reading material in their groups, which continued when the class came together, and students were still discussing the readings at the end of the period as they left the room. My hope for the class became a reality. The students were writing well thought-out papers, which I attribute to their team-based discussions. Not only did the students write good essays, but they looked forward to writing their essays and sharing their papers with their teammates. Would I use Team Based Learning again in my classroom? My answer is a definite, yes.

The School of Natural and Behavioral Sciences

Natasha LaMont, Biology: By the end of my first semester using TBL, I noticed there were additional benefits to the approach besides enhancing the student learning process. Students had a clearer understanding of their personal accountability for their school work, as well as accountability to their team members. They no longer depended on the weekly lectures from the instructor, and understood the importance of preparing for class ahead of time. The readiness assurance process assessed the students' learning comprehension for the instructor and promoted in-depth discussion of the material in the classroom.

Micha Tomkiewicz, Physics: I took the TBL workshop to explore application in two courses: The first course was an upper tier, general education course "Energy Use and Climate Change," CORC 3302, taught every semester, and the second was a Macaulay Honors College seminar that is given to students in the fall semesters. Both courses are anchored on climate change and on the book *Climate change: The fork at the end of now*. (Tomkiewicz, *Momentum Press*, 2012). Both courses are also anchored on a strong research component that requires collaborative efforts. During the fall 2013 semester the research component of the Macaulay seminar was focused on the ongoing efforts of CUNY colleges to deliver their commitments to the City of New York to reduce their carbon footprints by 30% in 10 years. The task for the students was to find out how the colleges are doing and rank them accordingly. The research questions for the upper tier Core course was to calculate the students' personal energy use and carbon footprints and calculate, assuming a business as usual scenario, how the world will look like when the average Chinese person will be as rich as the average American. The thinking was that one can integrate nicely the in-class components with the research components through the TBL methodology.

The TBL faculty workshop was presented to us during the spring 2013 semester in the TBL format that gave us plenty of opportunities to look for ways to adapt the format to the special needs of our courses. The first challenge in applying the approach was obvious from the start: how to adapt TBL to these two very differently configured classes.

I had seven students in the Macaulay seminar and 40 students in the upper tier course. I set the Macaulay students to work as one group and I divided the upper tier course into groups of six or

Faculty Reflections on Team-Based Learning at Brooklyn College

seven students. The upper tier class was moved to a classroom that was originally designed for Scale-Up (<http://scaleup.ncsu.edu/>) teaching that has many similarities with TBL. The first half of the semester of both classes was dedicated to the textbook. Every week the students took an IRAT and a tRAT that covered three chapters. The rest of the time was devoted to applications that connected the text with the research components that were assigned. The first compelling results were that in both courses the scores on the tRATs were consistently higher than those on the IRATs, providing the best evidence that the collective mode of learning works. With the end of the semester, I can conclude without reservations that the collective TBL work was much more effective and pleasant than the classroom teaching that I had applied previously. Hopefully, next semester we will be able to perform a formal assessment of the methodology.



Students in "Energy Use and Climate Change," CORC 3302

Photo: Tomkiewicz

The School of Visual, Media, and Performing Arts

Doug Cohen, Music: The course I taught employing for the first time TBL techniques was "Music: Its Language, History, and Culture," MUSC 1300. One of the strengths of TBL training is that it outlines effective techniques for group work within a course. What I found to be most important was selecting groups on the first day of class for the entire term based on mixing students with different levels of prior knowledge of music as well as making sure that all group work took place inside the classroom. There is much more to this pedagogy but following those two guidelines gave a solid foundation for effective team work. This section of MUSC 1300 was paired with two sections of English 1010 to create two first-year student learning community cohorts. It has always been a challenge to keep the integrity of the cohorts intact when two groups combine into one larger course, as happened here. Adding the requirement that team members must all be from the same cohort made it easier for each cohort to maintain its own identity and should enhance the students' first college year experience.

Jane Palmquist, Music: I used TBL in each of my sections of MUSC 1300. Although I have used effective collaborative group teaching techniques for many years, applying the TBL strategy improved teaching efficacy and enhanced student responsibility for learning. Although initially unconvincing about certain aspects of TBL (e.g., professor-assigned teams instead of student-selected groups; allocating class time for students to work on application assignments instead of working on these assignments outside of class), I have found these techniques to be especially effective. Being part of implementing a recognized college-wide initiative supported by the college faculty and administration has also been important. In the past, faculty members

Faculty Reflections on Team-Based Learning at Brooklyn College

using newer or non-traditional techniques and methods may have been criticized for not using the expected lecture-method. TBL has given faculty permission and encouragement to experiment with pedagogy — in effect, providing faculty a safety net and support system.

One of the most exciting aspects of the TBL Academy is that it has invigorated and energized faculty across the entire College. It has ignited faculty discussions about teaching and about how to improve teaching. TBL has refocused campus discussion from almost exclusively about curriculum to re-examining how we teach and how our students learn. I don't recall any other time in the past 15 years when so many faculty from across the campus were talking about teaching and improving teaching.

Concluding thoughts

Sharon Levy, *School of Humanities and Social Sciences*

One of the most unexpected and exciting consequences of our TBL training has been the sense of camaraderie and support that developed among the faculty who took part in the training. College teaching tends to be an individual and often isolated experience. I certainly haven't had many experiences at Brooklyn College which gave me time and space to sit down with my colleagues and talk about how to help our students do better in our classes. It's ironic that we won't hesitate to talk to each other about our research or writing, but somehow teaching itself is subject non grata. Most conversations around teaching seem to consist of mutual complaints about what our students don't know, can't do, and/or won't do, or about our workload. Yet in each TBL cohort, something amazing happened over the course of a semester: we became a team focused on the relationships among pedagogy, course design and student learning. Whether it was because we did the training using TBL

methodology or just due to the type of people who signed up, colleagues in very different disciplines, full-time and part-time, seasoned and early-career, came to enjoy working together to try out a new pedagogy. They did so in the hope that we could give students a richer content-based experience. But it wasn't easy. Over and over, at the start of the training, someone always said: "I'm sure TBL works at other institutions but it wouldn't work well here", or "I can see how TBL would work in some disciplines, but it can't be done in my discipline." And many others were thinking the same thing. But over the course of the training something interesting kept happening: people who were initially skeptical, dismissive, or resistant to both TBL and/or their colleagues' contributions really came to appreciate TBL as well as appreciate the diverse perspectives and experiences of their team members. More and more I believe the two are connected — for the faculty as much as for the students. We were always surprised by the number of people willing to show up on a Friday morning to share successes and challenges as they worked through using TBL. I was surprised — and humbled — by the courage of my colleagues and how it helped me: we had to rethink everything; we crawled and sometimes rushed out of our comfort zones; we took baby steps and leaps into the unknown. And with every new group who has been open to find out just "What IS this team-based learning about?" we are all finding an increasingly diverse and welcoming support group at Brooklyn College.