



Center for Teaching Excellence
Hampton University
Teaching Matters

December 2015/January 2016

Volume 10, Number 4

In this Issue

New Year's Resolutions from Hampton University Faculty

Problem Based Learning: Six Steps to Design, Implement and Assess

Announcements

New Year's Resolutions for Hampton University Faculty

As we reflect back on the year, 2015, the CTE Faculty Associates took the time to share their personal resolutions and wishes for Hampton University Faculty for the New Year in the effort to enhance the teaching and learning environment.

Dr. Spencer Baker, CTE Faculty Associate for Assessment

During this year of continuing focus on accountability, my New Year's resolution is simple! **I resolve to continue working effectively and collectively with others** so that I may maintain my personal cycle of growth and improvement! From working with individual students, faculty members, and administrators, to making changes to courses and programs that prepare young people for the future, I am accountable for my actions. This work must be done effectively so that my individual learning will be enhanced and improved. **I also resolve to share my accomplishments and challenges with my colleagues** who are faced with similar situations. I will do this through mentoring wherever I can and through sharing with my colleagues throughout the campus. As I mentor others, I also need mentoring, so I want my colleagues to share with me. This cycle of "collective mentoring" will ensure my growth and continuous improvement as a member of the Hampton University family.

So in the New Year, **I resolve to continue to work collaboratively with each of you** to make this year a little better for those we serve, our students. Let us *collectively* resolve to continue to send our "best and brightest" out into the world, intellectually prepared and anxious to pass on what we have provided them – "an education for life!"

Dr. Leona M. Johnson, CTE Faculty Associate for Pedagogy

Effective teaching is critical in student learning. Therefore, **I resolve to be a more effective teacher** by extending the use of technology in my "flipped" classes. In the past, I have used a graded assignment-based model in which students prepared assignments (e.g., critical thinking questions and journal critiques) prior to class time. Students received feedback in class during interactive discussion sessions and the assignments were graded electronically via Blackboard. This past semester, the class was inverted to include assigned chapter readings and Power Point slides which were posted on Blackboard. To ensure that students were prepared for class, they were expected to complete the assignments prior to coming to class. In the spring semester, I will be adding videos and other technology to my flipped classes to further probe questions as they relate to the material and assignments,

The student's "voice" (i.e., learning styles and classroom dynamics) is important. I resolve to gain a better understanding of my students' learning styles as I recognize that students may have a "preferred" style for processing information. I will evaluate the learning styles of my

students by utilizing assessment tools developed for this purpose at the beginning of the semester. I will also initiate a survey to ascertain students' perspectives on classroom dynamics. By understanding the perspectives of our students, we can ensure that their "voices" are heard in areas that directly affect their classroom experience. Their "voices" must also be considered when enhancing the curriculum and making decisions about pedagogy. Pedagogical improvements have significant implications for the way that we deliver information and impact the academic achievement of our students.

These resolutions are already helping to shape my lesson planning for the spring semester. I have realized that there is much that can be improved relative to my pedagogy as **I resolve to continually strive to be a better teacher and resource for others.**

Dr. Zina T. McGee, CTE Faculty Associate for Research

I resolve to make improvements in the presentation of new developments and recent practices in research and statistics, including demonstrations using graphics. The application of new data sets from the Inter-Consortium of Political and Social Research (ICPSR) for students enrolled in research and statistics courses will allow them to develop a research design that addresses social and political issues.

I resolve to continue to seek funds that will allow more students to be trained as research assistants for graduate careers in pursuit of the Ph.D. **I also resolve to use simulated computer generated case studies as the basis of instruction** for Violence Against Women, Criminology and Juvenile Delinquency courses to give students hands-on application of skills to examine social and criminological issues relating to people of color marginalized by an oppressive structure. Finally, **I resolve to strengthen my participation in the grant review process** (as consultant and consortium member), and **I resolve to continue to assist students with development of research skills** including those needed for presentations and publications.

Dr. Arun Verma, CTE Faculty Associate for Technology

The students who now come to Hampton University have been raised with rich information and technologies in the school system. Since birth, their lives have been surrounded by computers, the internet, cell phones, video camera, digital music, and social media. The invasion of multiple technologies challenges us to effectively teach this generation who are growing up with evolving technologies on a daily basis. The use of technology is their educational foundation. For these students, "engagement" is the primary focus of education, and not the "retention of content" as most of the content is available at their finger-tips through the internet. Numerous apps for smartphones and tablets, and applications for computers and laptops have been developed to make instruction "engaging" and pedagogical methods more "effective." For example, BlackBoard, blogs, Evernote, EasyBib, Learnist, PollEverywhere, Quizlet, Socrative, StudyBlue, and Webinars are some of the apps and applications available to the faculty.

To improve student achievement, the faculty must "improvise" in the classroom setting. This means that our role must change from a "giver" of course content to a "coach" and/or a "guide" to keep students engaged. Today, many students become disengaged with dated and "passive" content delivery, preferring instead to be "active" learners. An "engaged" class will result in the understating of context, contents and concepts thereby improving learning, retention and ultimately, degree completion. What could be a better excuse for mastering one app and/or at least one application monthly as a New Year's Resolution? Successful use requires an easy and slow incorporation of technology in instruction and pedagogy. My recommendation would be to begin the New Year with mastering the "Safeassign" feature of BlackBoard and "PollEverywhere."

Now, it's your turn. As Hampton University faculty, what are *your* New Year's Resolutions for the classroom?

Problem-Based Learning: Six Steps to Design, Implement, and Assess

By Vincent R. Genareo, PhD, and Renee Lyons

Twenty-first century skills necessitate the implementation of instruction that allows students to apply course content, take ownership of their learning, use technology meaningfully, and collaborate. Problem-Based Learning (PBL) is one pedagogical approach that might fit in your teaching toolbox.

PBL is a student-centered, inquiry-based instructional model in which learners engage with an authentic, ill-structured problem that requires further research (Jonassen & Hung, 2008). Students identify gaps in their knowledge, conduct research, and apply their learning to develop solutions and present their findings (Barrows, 1996). Through collaboration and inquiry, students can cultivate problem solving (Norman & Schmidt, 1992), metacognitive skills (Gijbels et al., 2005), engagement in learning (Dochy et al., 2003), and intrinsic motivation. Despite PBL's potential benefits, many instructors lack the confidence or knowledge to utilize it (Ertmer & Simons, 2006; Onyon, 2005). By breaking down the PBL cycle into six steps, you can begin to design, implement, and assess PBL in your own courses.

Step One: Identify Outcomes/Assessments

PBL fits best with process-oriented course outcomes such as collaboration, research, and problem solving. It can help students acquire content or conceptual knowledge, or develop disciplinary habits such as writing or communication. After determining whether your course has learning outcomes that fit with PBL, you will develop formative and summative assessments to measure student learning. Group contracts, self/peer-evaluation forms, learning reflections, writing samples, and rubrics are potential PBL assessments.

Step Two: Design the Scenario

Next you design the PBL scenario with an embedded problem that will emerge through student brainstorming. Think of a real, complex issue related to your course content. It's seldom difficult to identify lots of problems in our fields; the key is writing a scenario for our students that will elicit the types of thinking, discussion, research, and learning that need to take place to meet the learning outcomes. Scenarios should be motivating, interesting, and generate good discussion. Check out the websites below for examples of PBL problems and scenarios.

[Problem-Based Learning at the University of Delaware](#)

[Problem-Based Learning in Biology](#)

[Science PBL](#)

Step Three: Introduce PBL

If PBL is new to your students, you can practice with an "easy problem," such as a scenario about long lines in the dining hall. After grouping students and allowing time to engage in an abbreviated version of PBL, introduce the assignment expectations, rubrics, and timelines. Then let groups read through the scenario(s). You might develop a single scenario and let each group tackle it in their own way, or you could design multiple scenarios addressing a unique problem for each group to discuss and research.

Step Four: Research

PBL research begins with small-group brainstorming sessions where students define the problem and determine what they know about the problem (background knowledge), what they need to learn more about (topics to research), and where they need to look to find data (databases, interviews, etc.). Groups should write the problem as a statement or research question. They will likely need assistance. Think about your own research: without good

research questions, the process can be unguided or far too specific. Students should decide upon group roles and assign responsibility for researching topics necessary for them to fully understand their problems. Students then develop an initial hypothesis to “test” as they research a solution. Remember: research questions and hypotheses can change after students find information disconfirming their initial beliefs.

Step Five: Product Performance

After researching, the students create products and presentations that synthesize their research, solutions, and learning. The format of the summative assessment is completely up to you. We treat this step like a research fair. Students find resources to develop background knowledge that informs their understanding, and then they collaboratively present their findings, including one or more viable solutions, as research posters to the class.

Step Six: Assessment

During the PBL assessment step, evaluate the groups’ products and performances. Use rubrics to determine whether students have clearly communicated the problem, background, research methods, solutions (feasible and research-based), and resources, and to decide whether all group members participated meaningfully. You should consider having your students fill out reflections about their learning (including what they’ve learned about the content and the research process) every day, and at the conclusion of the process.

Although we presented PBL as steps, it really functions cyclically. For example, you might teach an economics course and develop a scenario about crowded campus sidewalks. After the groups have read the scenario, they develop initial hypotheses about why the sidewalks are crowded and how to solve the problem. If one group believes they are crowded because they are too narrow and the solution is widening the sidewalks, their subsequent research on the economic and environmental impacts might inform them that sidewalk widening isn’t feasible. They should jump back to step four, discuss another hypothesis, and begin a different research path.

This type of process-oriented, self-directed, and collaborative pedagogical strategy can prepare our students for successful post-undergraduate careers. Is it time to put PBL to work in your courses?

References

- Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijsselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.
- Dochy, F., Segers, M., Van den Bossche, P., & Gijbels, D. (2003). Effects of problem-based learning: A meta-analysis. *Learning and instruction*, 13(5), 533-568.
- Ertmer, P. A., & Simons, K. D. (2006). Jumping the PBL implementation hurdle: Supporting the efforts of K–12 teachers. *Interdisciplinary Journal of Problem-based Learning*, 1(1), 5.
- Gijbels, D., Dochy, F., Van den Bossche, P., & Segers, M. (2005). Effects of problem-based learning: A meta-analysis from the angle of assessment. *Review of Educational Research*, 75(1), 27-61.
- Jonassen, D. H., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2), 4.
- Norman, G. R., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine*, 67(9), 557-565.
- Onyon, C. (2012). Problem-based learning: A review of the educational and psychological theory. *The Clinical Teacher*, 9(1), 22-26.
- Vincent R. Genareo is a postdoctoral research associate at Iowa State University, Research Institute for Studies of Education (RISE). Renee Lyons is a PhD candidate at Clemson University, Department of Education.*

Announcements

2016 Annual Meeting: How Higher Education Can Lead—On Equity, Inclusive Excellence, and Democratic Renewal

January 20, 2016 to January 23, 2016

Grand Hyatt Washington

1000 H Street, NW

Washington, DC 20001

Students of color and students from low-income families will soon form the majority of the nation's college-eligible learners. Their fortunes will shape—for better or worse—America's economic and global future. These students are democracy's hope and America's future. They need and deserve the advantages of a horizon-expanding higher education. They need and deserve a twenty-first-century liberal education.

Carol Geary Schneider, President of AAC&U

[Registration information available here.](#)

Pre-Meeting Symposium

The LEAP Challenge and the Equity Imperative

Wednesday, January 20, 8:30 am–4:45 pm

Seventh Annual E-Portfolio Forum

Achieving Equity through Student Success and E-Portfolios

Saturday, January 23, 8:00 am–5:00 pm

About the Annual Meeting

The 2016 Annual Meeting will focus on higher education's most pressing educational challenges—those centered on the intersections of equity and quality.

- How can higher education provide equitable access to high-quality liberal education to all students?
- How do we as a community advance equity-minded practices that provide a liberating educational experience for New Majority students who have been previously underserved and less engaged with high-impact practices and clear learning pathways?
- How do we ensure that all students are prepared for work and life in a turbulent and globally

connected environment?

- What is higher education's role in reversing the deepening divides and disparities in our society?

Responding to the changing economic and social landscape in America and the world and to better prepare our increasingly diverse student populations for success locally and globally, the 2016 Annual Meeting will foster discussion and encourage action to address the deepening disparities that endanger America's economic and democratic future. The gaps are widening despite America's promise of universal educational opportunity, and the inequities challenge American ideals. America's future vitality is at stake, and higher education must play a critical role to remedy these imbalances.

The meeting will offer equity frameworks and tools to guide the development of institutional structures and practices that expand access to high-quality, liberal education grounded in high-impact practices and inquiry-based learning. Sessions will focus on evidence-based practices that support broad student success and deep, engaged liberal learning. The meeting will highlight innovative ways to provide students with clear guided pathways and meaningful learning opportunities to prepare them to tackle complex global problems in the workplace and society. Our goal is tap the wisdom of those already working creatively to provide an empowering education—rather than deliberately limited opportunity—to those New Majority students who rightly see higher learning as their best hope for a better future.

The Annual Meeting will share lessons learned from colleges and universities that are:

- Acting with a sense of urgency to provide equitable access to quality education for all students
- Developing guided pathways to support students educationally and socio-culturally from first to final year and across transfers
- Implementing evidence-based educational practices that support student success at all levels
- Preparing students with a sound liberal education to address the workplace and global challenges identified by employers
- Integrating global learning and civic engagement into the general education curriculum in a meaningful way to prepare students to address unscripted questions prior to entering the globalized workforce
- Scaling practices “that work” to increase student persistence and achievement in STEM fields
- Building effective integrative and interdisciplinary curricular pathways for the humanities and social sciences
- Using digital and connected learning in meaningful ways to ensure inclusive excellence and expand student participation in high impact educational practices
- Creating successful institutional models where students from all backgrounds are finding academic and professional success
- Building educationally generative alliances with employers and policy leaders.

We look forward to seeing you this January in Washington, DC.