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A Look at Problem-Based Learning in High School Classrooms to Promote Student Activism

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Problem based learning has more recently become a common term in public education. There is much positive potential when implementing problem based learning at the high school level. Here I review positives while not completely ignoring some of the negatives associated with implementing a problem based learning model at the high school level. More importantly, I will move beyond a look at the model of problem based learning and focus on how the model encourages students to take an active role in their learning as well as in the community. With the support of Ernest Morrell's (2003) theories of promoting students activism, I will combine personal implications from researching the background of the model holistically as well as examples of successful practices. My research will create an understanding on how students benefit from problem based learning by increasing critical thinking skills as well as literacy skills and also how the community in which the students reside also has the potential to benefit.

Keywords: problem-based learning, civic activism, popular culture in the classroom

“I think that schools today need to change...if teachers would focus on more than one teaching styles [sic] then less people would drop out and everyone would get better grades. And I think that it will help us prepare for the real world.” – 9th grade student, Pratt High School

As society continues into the 21st century and technology increasingly blurs boundaries allowing markets and economies to become even more global, education finds itself amidst a global competition as well. In the quote above, a 9th grade student expresses students’ fears of schools not providing the skills necessary to compete globally in both education and industry. Students are very aware that the competition is not just among schools with respect to standards; they are competing globally for acceptance in American universities, as well as in the American job market. Although the world around us is quickly adapting and adjusting to technology and global advancements, education seems to constantly play catch-up while still using age-old models. Currently, the majority of American employers are going overseas to look for potential employees with the skills to compete in such markets (Johnson, Smith, Smythe, & Varon, 2009). Hence, we are adding to our own unemployment rate.

Questions then arise among educators, researchers, and policy makers: How do we prepare our students to compete at the global level? How do we ensure our students are proficient in the skills necessary to be literate students and job seekers? John Lennon once said, “think globally, act locally.” It is about time we allow our students to do so in order to sprint ahead instead of always coming in second place. The problem based learning model allows for students to become forerunners of education in a multitude of ways: with their own education and within their community at large. As the quote mentions above, students feel the need for a change within their education. I will take a look at problem based learning as a 21st century model that provides students the ability to become self-advocated learners who are active in local and global issues that are very real to all members of society. More so, I will look at problem based learning through a lens supported by Ernest Morrell’s (2003) perspective of popular culture in the classroom, which is defined as “providing a logical connection between lived experiences and the school culture for urban youth” (p. 73).

PBL – Project Based or Problem Based? The Differences and Connections

The acronym PBL can stand for either problem based learning or project based learning. Although two completely different models, problem based and project based models do have similarities and oftentimes work in conjunction with one another. Project based learning is often an integral part of problem based learning and a way of scaffolding the skills necessary to be successful with the problem(s) presented.

Problem based learning focuses on critical research and critical thinking skills by challenging students, as I would say in my own words, to “learn to learn.” Problem based learning is unique in its ability to address both content and problem solving skills. It focuses on the importance of reading, thus making the process deeper than just knowledge seeking. In problem based learning, students develop critical thinking abilities that allow them to question and analyze text (both print and non-print). Students find themselves questioning an author’s purpose and making personal connections to the text (Ngeow & Yoon, 2001). Therefore, problem based learning is presented more as a critical research model than project based.

Both project and problem based learning models focus on students working towards a problem, and the teacher acts as a facilitator rather than the instructor, leaving the students in charge of their learning experiences. The teacher works solely as a mediator who scaffolds information as necessary. Often problem based learning also incorporates projects as a means of solving the larger problem (Faris, 2008). The main difference between the two models is with project based learning the issue at hand is often specific, providing more guidance for the student while problem based learning supports an ill-structured, complex task that has more than one answer (Koszalka, Song & Grabowski, 2001). However, both problems in either model are very real and current in students' lives, and the students are the ones who choose the problem to research. One of the most important aspects of both project and problem based learning is it provides interdisciplinary learning where students are applying knowledge across curriculum continuums (Putnam, 2001). In other words, both project and problem based models provide an environment where students are working towards a larger learning goal.

Problem Based Learning Model: The 6 Dimensions

The main objective of problem based learning is to provide students with the skills necessary to solve the complex, multi-faceted problems they will face as working adults. In doing so, students can develop analytical research, thinking, and reading skills to be literate adults. Putnam (2001) mentions how the original PBL model pioneered by Howard Barrows of Southern Illinois University School of Medicine operates on 6 dimensions. The dimensions work cohesively to provide the best skill set for successful students. These dimensions include:

1. Hypothetical-deductive reasoning, most commonly known as the scientific method. Students apply the scientific method to hypothesize current world issues.
2. Development of cognitive flexibility. Students develop the need for understanding information, so they are developing knowledge and skills rather than just acquiring.
3. Self-directed learning. Students plan and review information, finding a solution to the current world issue, which in turn helps them understand the necessity of thorough research and analytical skills.
4. Development of collaboration skills. These collaboration skills are necessary for success in the team dynamic found in most industries. PBL ensures students are prepared with the necessary team-building skills to be successful leaders in the workplace.
5. Student-centred learning. Most importantly, the PBL model is supported by student-centred, teacher facilitated learning.
6. Development of self-reflection habits. Students learn the importance of honest self-reflection and setting realistic learning goals. (Putnam, 2001)

The six dimensions of problem-based learning provide opportunities for students to develop and broaden the necessary skill-set in solving current issues. However, it is essential for the facilitator (teacher) to scaffold these skills when necessary. The facilitator should gauge the difference between the activities the students can do on their own and the ones that require more guidance and explanation (Ngeow & Yoon, 2001). Once the foundation is laid and students' development commences, the positive implications are endless because the vague structured, complex tasks of problem based learning promotes reflective thinking (Koszalka, Song & Grabowski, 2001). The development of critical research, thinking, and reading skills is not only pertinent for real-life scenarios; it also provides imminent results by developing the necessary skills to achieve on standard based assessments.

If Given the “Chance”: A Hypothetical Scenario

Besides finding PBL completely intriguing as a high school teacher, I truly believe in the potential it has to promote socially and academically strong individuals. I cannot help to think what I would do in the classroom given the chance to implement such a model.

The “chance” I speak of is the opportunity to provide students with the prospect expand their minds and individuality. Below is my hypothetical scenario for a PBL classroom:

- The setting: My PBL scenario consists of three 12th grade content areas: senior language arts, economics/government, and statistics. The students in the PBL community will receive credit for each content area. A total of three certified instructors, one per content area, will act as facilitators. The class will be part of a three hour block where all content areas are covered during that time. The size of the class will vary but is larger than a traditional classroom with numbers up to 100 students.
- The focus question: The question is not much different from a traditional lesson plan, the students in the PBL community are proposed with a type of focus question. The question is vague enough for students to conclude their own ideas and take their own stance. For my hypothetical scenario, my focus question is: How will the state’s budget crisis directly relate to you in the next five years? Choose a specific idea that you can research and investigate; then, create a solution for the problem. You will then conclude your findings and present them to a public forum.
- Covering content standards: Students will cover the state standards of language arts, social studies, and math.
 - Language Arts: Students will research the topic using different print and non-print reference materials. Students will interview experts in relation to their research topic. They will record their findings, verbalize ideas in both formal and informal settings, and create a written and verbal proposal of their findings that will be presented to a public forum.
 - Economics/Government: Students will use their content knowledge of government practices to understand the chains their proposal must follow in order to be placed into action. They will have a thorough understanding of what departments they will need to contact and personal who handles such topics as the one they are researching. They will also use their understanding of economics to forecast future economic standings.
 - Statistics: Students will use their content knowledge in statistics to collect and synthesize through data and put a number to their forecasted economic ideas.

Possible student responses/research topics: Some topics students may choose to research include the state’s budget crisis in relation to:

1. secondary education state-funded scholarships and financial aid
2. the prospective job market in the next five years
3. the prospective housing market in the next five years
4. possible tax reform
5. possible immigration reform (in relation to state spending)

- Student activism: Students will not only actively research the topics chosen but they will also put their findings into action by creating a proposal to present at a public forum. Students can choose to set up a private meeting with a public official or speak at a public hearing regarding their topic. Students will also truly put their voice into action when they step up to the voting ballot next election. As Ernest Morrell (2003) supports with his research, PBL allows students to have a voice beyond the classroom.

Concluding thoughts

As a high school language arts teacher, I unfortunately see first-hand the negative aspects of literacy instruction in institutional public education. I have seen my fair share of students drop out asking myself what I could have done differently to “save” them. I see the kids who do stay but complain on how American education “makes no sense” and “we are learning stuff we’ll never need.” And although I listen and often stand up for the public education system I do not one hundred per cent believe in, I find myself siding with the students. I see the stress standardized testing puts on both teachers and students and the types of attitudes students are forming towards education because of them. Instead of instilling values of learning and intellect, we are inadvertently telling students all that matters is passing the test and then get hurt when students come into a classroom with that exact “passing is all that matters” attitude. We are valuing thinkers who can choose between four given answers, and when they are able to choose between a, b, c and d correctly, we consider them exceeding expectations of learning. In my opinion, allowing students to think beyond the paper and standards and letting students form a hypothesis to a larger real-world problem while using a voice to express their findings and ideas is a better strategy for student investment and agency. I consider myself lucky to have students who genuinely care about many of the large issues outside of the classroom; issues that they know will one day affect them. We can only be so lucky to have such individual thinkers, but instead of fostering that energy in the classroom, we are asking for them to “turn if off” for majority of their day. If we, current educators and policy makers, can only be so brave to take that aforementioned “chance” maybe our students will begin to see the need for public education, something in which they are quickly losing faith. It is time that we look beyond the rows of chairs and whiteboard to what skills our students truly need when they leave us. We need to foster the type of individual and critical thinking skills necessary to be successful in the “real-world”. The students are asking, we just need to listen.

References

- Faris, A. (2008). *The impact of PBL on the students' attitudes towards science among ninth graders in Hamza Independent School*. Retrieved from ERIC database. (ED502097).
- Johnson, L. F., Smith, R. S., Smythe, J., Varon, R. K., & New Media, C. (2009). Challenge-based learning: An approach for our time. *New Media Consortium*, 1-44.
- Koszalka, T. A., Song, H., & Grabowski, B. L. (2001, November). *Learners' perceptions of design factors found in problem-based learning (PBL) that support reflective thinking*. National Convention of the Association for Educational Communications and Technology, Atlanta, GA.
- Morrell, E. (2002). Toward a critical pedagogy of popular culture: Literacy development among urban youth. *Journal of Adolescent & Adult Literacy*, 46(1), 72-77.
- Morrell, E. (2009). Critical research and the future of literacy education. *Journal of Adolescent & Adult Literacy*, 53(2), 96-104.
- Ngeow, K., Kong, Y., & ERIC Clearinghouse on Reading. (2001). *Learning to learn: Preparing teachers and students for problem-based learning*. Retrieved from ERIC Digest. (ED457524).
- Putnam, A. R. (2001, December). *Problem-based teaching and learning in technology education*. Annual Conference of the Association for Career and Technical Education, New Orleans, LA.