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Message From The Future: Project-Based Learning in an At-Risk Academy

Under an echoing, robotic voice, my ninth grade Project-Based Learning (PBL) students hush to hear the following critical alert:

Attention humans: This is an urgent message from the future. As of the year 2163, the earth-bound species known as Homo Sapiens, has become extinct. Because they were shortsighted, greedy, and apathetic, the humans were too late in their efforts towards self-preservation. Since humans limited their sources of energy to non-renewables, they exhausted the supply of natural resources. This resulted in war, famine, disease, and the eventual destruction of human-life as you currently know it. This message comes to you as a challenge to save the future of humankind. Your mission is to evaluate all forms of energy and then to persuade your species to invest in the energy sources that will save humans from destruction.

Like all entry events, this futuristic scenario-builder was designed “to provoke thinking and engage students in the project” at hand (Markham, Larmer, & Ravitz, 2003, p. 84). This goal of provoking and engaging students is the key instructional objective for the teachers in the Project-Based Learning Academy at my high school. Last year’s alarming data surrounding nearly 100 At-Risk eighth graders—soon to be transitioning to the high school—prompted the development of the new school-within-a-school model in Cedar Springs Public Schools, a sub-rural community twenty miles north of Grand Rapids. Consequently, I was chosen as the English Language Arts teacher for the PBL Academy.

The ninth grade students with whom I am currently working began with an average reading level, according the Scholastic Reading Inventory, of about fourth grade. Also, most of the students failed more than three core classes during their eighth grade year and had excessive issues with truancy. Because the transition from middle school to high school is often a difficult one, the administration felt that the creation of a Project-Based Learning Academy would tackle the issues of engagement and relevancy for these students.

In a time when choices seem to be limited and the demands and expectations that pound on the doors of our classrooms seem to echo from the walls within, I’m discovering that teachers can shape their instruction in innovative ways that help students transact with their learning more effectively than the looming pressure from outside our doors.

Avoid Destruction

Under the recent pressures of No Child Left Behind (NCLB), many schools are looking for innovative ways to improve student performance, especially in the area of reading proficiency. Accordingly, many hold the belief that “reading is scientific,

a series of isolated skills that can be identified, measured, put together, and ultimately taught according to a prescribed, sequential formula” (Garan, 2002, p. 3). Some schools believe that by finding just the right prescribed formula, their issues related to low reading proficiency will be solved. Many classroom teachers are pressured to operate under this blind focus on isolated skills and observable behaviors, otherwise known as behaviorism. Most do so without realizing it. Students follow linear steps through programmed, errorless learning that can easily be measured according to the standards of NCLB. This type of learning is ideal for many school administrators, thus the teachers comply with the echoing demands.

Under the behaviorist theory, learning results from response to stimuli through repetition and practice. In the same way, pre-packaged instruction supported under NCLB conditions fearful teachers with this same method of reinforcement and, more notably, punishment: “[I]f my students don’t pass the test, if we don’t make [Adequate Yearly Progress] AYP, then I’ll be fired and/or our school will lose needed funding” (Beers, Probst, & Rief, 2007, p. 257). This daunting form of behaviorist conditioning shapes many literacy programs advertised to help low-level and reluctant readers like those with whom I am working.

Sean A. Walmsley suggests that these behaviorist literacy interventions focus “on decoding and spelling accuracy and completion of lots of low-level skills texts meant to provide practice on the imagined subprocesses of reading and writing” (cited in Allington, 2006, p. 175). So, while easily measurable, in that they hopefully move from simple to more complex tasks, these programs fictionalize the notion that literacy is standard and predictable for all students. They break reading into unrealistic units of measurement rather than a process that is complex and uniquely individual.

Sense of Urgency

Since this particular group of ninth graders has largely been unsuccessful in a traditional school setting, the philosophy behind our practice must be unlike anything they’ve experienced thus far in their education. It is widely known that under the behaviorist model, the child is considered “an empty vessel to be filled PBL teachers must create tasks and conditions under which student thinking can be revealed — a cocreative process that involves inquiry, dialogue, and skill building as the project proceeds” (Markham et al., 2003, p. 8-9). I’ve found that since we have begun to see the students as more than thirsty sponges, they have begun to exhibit more ownership of their learning.

Historically, it is recognized that John Dewey (1902) also disagreed with the behaviorist theory, saying that “Learning is active. It involves reaching out of the mind” (p. 13). More recently, Alvermann (2007) follows this opposition to the behaviorist perspective: “Rather than view adolescents as incom-

plete, or 'not-yet' adults who thus are less competent and less knowledgeable than their elders, scholars of youth culture today are more apt to look on young people as having expertise in areas that have to do with their particular situations and the particular places and spaces they occupy" (p. 22).

While my students have struggled in the traditional academic setting, they are unique in areas of interest and intellect; therefore, I must use their expertise in order to engage them in our shared curriculum. All too often, schools look for the one-size-fits-all literacy approach because it meets the needs of the demanding voices from higher up. This traditional approach, however, ignores student expertise and does not meet the needs of our students. This leaves us questioning: As teachers, who are we really serving?

Further elaborating on the troublesome, formulaic type of literacy instruction, Walmsley (2006) maintains, "Reading real books is typically not a dominant theme in [current literacy classroom] designs. Reading self-selected books is even less common" (cited in Allington, 2006, p. 175). If I am to help my students jump as many as five grade levels this year, in regards to their reading proficiency, I cannot see that happening by mandating the use of a common basal reader or purchased program when I know my students' complex and unique needs will not be met without engaging them in the "cocreative process" that is their learning. The only way to engage them in reading is through choice and access to real texts. The same way that adult readers like to wander through bookstores touching the silky covers of new titles, our students are hungry for books that connect to their lives and interests.

Sources of Energy

Likened to the work of John Dewey, Project-Based Learning is "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks" (Markham et al., 2003, p. 3, 4). Thus the futuristic entry event described earlier prompts students in the PBL Academy to answer, through an interdisciplinary unit between Earth Science and English Language Arts, the following driving question: What energy sources should we invest in right now to save the future of humankind?

These students collaborate to solve the problem of human destruction, drawing on their varying skill sets and schemas. Ultimately, they choose the direction of the work. As PBL teachers, we've been given the freedom to "[a]bandon the notion of subject-matter as something fixed and ready-made in itself, outside the child's experience; cease thinking of the child's experience as also something hard and fast; see it as something fluent, embryonic, vital; and we realize that the child and curriculum are simply...[a] continuous reconstruction" (Dewey, 1902, p. 16).

Project-Based Learning draws on the notion that learning is a social activity. Dewey (1897) points out, "that the school is primarily a social institution" (p. 7). He adds "that education... is a process of living and not a preparation for future living." He believed "that the school must represent present life—life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the playground" (p. 7). Thus,

while I should create relevant projects for my students, the demands of an industrial culture cannot completely shape my instruction. I cannot teach simply to create a future workforce.

Learning in a PBL classroom is also about the social interaction between my students and myself and between my students and their peers. Vygotsky (1978) believed that "The most significant moment in the course of intellectual development...occurs when speech and practical activity...converge" (p. 24). So, to be truly successful as a PBL teacher, I must support my students as they communicate in groups to search out answers and solutions to real-life dilemmas (Markham et al., 2003). Along with creating engaging projects, my role is also to build a supportive environment for my students. In particular, this carries over to reading instruction. In a social constructivist classroom, "the questions [I must] ask need to show a genuine interest in the meanings the students construct rather than insisting on pre-conceived understandings" (Yang & Wilson, 2006, p. 368). Then I can assess my students' literacy growth during individualized reading conferences over their self-selected texts.

Invest in the Future

Since "[l]earning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers" (Vygotsky, 1978, p. 90), the PBL students should have great opportunity for expression of individualized voice and choice. For example, the culminating product for the renewable energies project will be entered in Westinghouse's Science Video Contest on forms of energy. The videos can be staged as a short play, commercial, news broadcast, talk show, music video, documentary, etc. In order for students to generate projects with high-level thinking, "[o]ral language development [must play] a critical role in learning...What they may lack is the language to describe thinking. Rather than assuming they aren't capable of thinking in more sophisticated ways, we must help them develop the language to define and describe their thinking" (Keene & Zimmerman, 2007, p. 40). By modeling think-alouds, instilling conversation protocols, and providing opportunities for reflection, students in the Project-Based Learning Academy learn the skills to interact and collaborate with their peers in a productive and engaging way.

As a cornerstone to PBL, "most teachers recognize that active learning is vital; [although] not all of us react in the same way to an open-ended process" (Markham et al., 2003, p. 9). Even between the four core teachers in the Academy,

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this struggle for control has jeopardized the ownership some PBL students have gained for their learning. "Allowing your students to work independently is an essential aspect of social constructivist theory. Setting tasks which allow students to read in areas which interest them and for purposes which are important to them is the best motivator" (Yang & Wilson, 2006, p. 370). In my English Language Arts class, I've done this by using a modified reader's workshop model that emphasizes choice in book selection. Harvey and Goudvis (2000) recommend that readers self-select about 80 percent of the text they read in class. We know that students increase their literacy when they read books they choose. Harvey and Goudvis remind us to fill our classrooms with "books at every level, on every conceivable topic, to ensure that kids get their hands on books they want to read" (p. 29). I've kept the reader's workshop open-ended by supporting dialogue around books, providing plenty of in-class time to read, and encouraging choice from more than 1,100 books in my classroom library.

A Critical Challenge

"Begin with the end in mind" is a common phrase used when planning in a Project-Based Learning class. By doing so, like with the robotic entry event from the future, students "retain more information, apply their knowledge more skillfully, and feel more motivated to achieve" (Markham et al., 2003, p. 13). In particular to literacy growth, "[t]he social constructivist approach to reading offers tools and principles for [PBL] teachers to draw students into energetic participation in text events, entering into active dialogue with texts and their authors, not as outsiders, but as active participants" (Yang & Wilson, 2006, p. 370).

For a group of 100 low-level reluctant students, this is what it looks like to invest in the future and avoid destruction of one's academic life.

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