Why Project-Based Learning?

Students want to learn! Sometimes as classroom teachers it doesn't always feel that way, but it is our most important guiding principle. Students want to have a sense of autonomy. Giving students choices in how they meet educational outcomes makes them active participants in their learning, increasing engagement and elevating student well-being and satisfaction. Studies comparing learning outcomes for students taught via project-based learning (PBL) versus traditional instruction show that when implemented well, PBL increases long-term retention of content, helps students perform as well as or better than traditional learners in high-stakes tests, improves problem-solving and collaboration skills, and improves students' attitudes towards learning (Strobel & van Barneveld, 2009; Walker & Leary, 2009).

We have designed VWE II around project-based learning because most of what our students will be doing in the world of work will require autonomous decision making, self-guided research, and use of professional communication skills, all of which are fostered in a PBL curriculum. If we want to prepare our students to be successful in this ever-changing work environment, honing those skills now is a must.

So what is project-based learning?

According to researchers PBL involves (Barron & Darling-Hammond, 2008; Thomas, 2000):

- students learning knowledge to tackle realistic problems as they would be solved in the real world
- increased student control over his or her learning
- teachers serving as coaches and facilitators of inquiry and reflection
- students (usually, but not always) working in pairs or groups

Project-based learning involves completing complex tasks that typically result in a realistic product, event, or presentation to an audience.
(Barron & Darling-Hammond, 2008)

Thomas (2000) identifies five key components of effective project-based learning. It is: central to the curriculum, organized around driving questions that lead students to encounter central concepts or principles, focused on a constructive investigation that involves inquiry and knowledge building, student-driven (students are responsible for designing and managing their work), and authentic, focusing on problems that occur in the real world and that people care about.

According to this defined feature, projects are the curriculum. In PBL, the project is the central teaching strategy; students encounter and learn the central concepts of the discipline via the project. There are instances where project work follows traditional instruction in such a way that the project serves to provide illustrations, examples, additional practice, or practical applications for material taught initially by other means. (Thomas, 2000)

PBL projects incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects. (Thomas, 2000)

PBL and Accommodations for All Learners

The projects presented in VWE II are to be thought of as templates and are not set in stone. Teachers and students are encouraged to work together to fashion products and rubrics that fit the individual student's interests and needs. PBL presents a teacher with a variety of opportunities to modify project outcomes to meet the needs of all learners. With few exceptions, none of the projects included in the VWE II curriculum are out of reach for any of our differently-abled learners. As educators we are often tasked with ensuring that students with a wide range of abilities are all reaching our learning objectives. PBL allows for easy, individualized accommodations.

One of the key principles of modified assignments for students is that the objective does not change for the student, instead what is being modified is the length of the final product, the number of examples used to demonstrate objective mastery, complexity of final product, etc. We are still holding students accountable for their own learning, just presenting them with alternative pathways to demonstrate that learning.

For example, the Virtual Job Interview Project could be modified for a student with an IAP in a number of ways such as:

- All projects can be assigned as a pair or a small group project. For students with problems focusing or maintaining attention, this is an ideal way to assist.
- Modified rubric requiring fewer questions (7 instead of 10 for full credit, for instance) or a shorter interview or reflection, etc.
- Extended time to complete the project. If you are scheduling multiple days for students to present their projects, you could assign this particular student to present on the last day.
- More frequent check-ins with the student on project progress. Teacher and student could create a checklist of steps for the project based on the rubric, providing additional structure.

Barron, B., & Darling-Hammond, L. (2008). Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning (PDF). Powerful Learning: What We Know About Teaching for Understanding. San Francisco, CA: Jossey-Bass. https://backend.edutopia.org/sites/default/files/pdfs/edutopia-teaching-for-meaningful-learning.pdf

Thomas, J. W. (2000). A review of research on project-based learning (PDF). http://www.bie.org/research/study/review_of_project_based_learning_2000

Refer to resources 01-05 and 01-06 for sample project integration timing.