Project-Based Learning

New Teacher Workshop – March 24, 2011

Presented by Terri Bialkin, Sandy Thompson & Paulette Salomon

What is Project-Based Learning?

- PBL is a model for classroom activity that shifts away from the classroom practices of short, isolated, teacher-centered lessons and instead emphasizes learning activities that are long-term, interdisciplinary, and student-centered.

Why will students “buy into” the idea of PBL?

- Learning experiences are designed as complex, authentic (real-world) projects
- The contexts for many of the projects are found outside the school walls
- Projects emerge from needs in the community or home; they arise from social issues, or perhaps physical, emotional, or recreational needs
- Some can be linked with industry or business activities

Project-Based Learning engages students in complex, real-world problem solving that is:

- Academically rigorous
  - Students use prior knowledge and research skills
  - Students determine what new academic knowledge and research skills are needed to acquire them
  - Students gather information from a variety of sources
  - Teachers encourage work that is complex and draws on a full range of students' abilities

Project-Based Learning engages students in complex, real-world problem solving that is:

- Relevant to students and the community
  - Students choose projects based on interests
  - Student learning has value in the community
  - Curriculum is related to real-life issues helping students understand what they are learning and why they are learning it

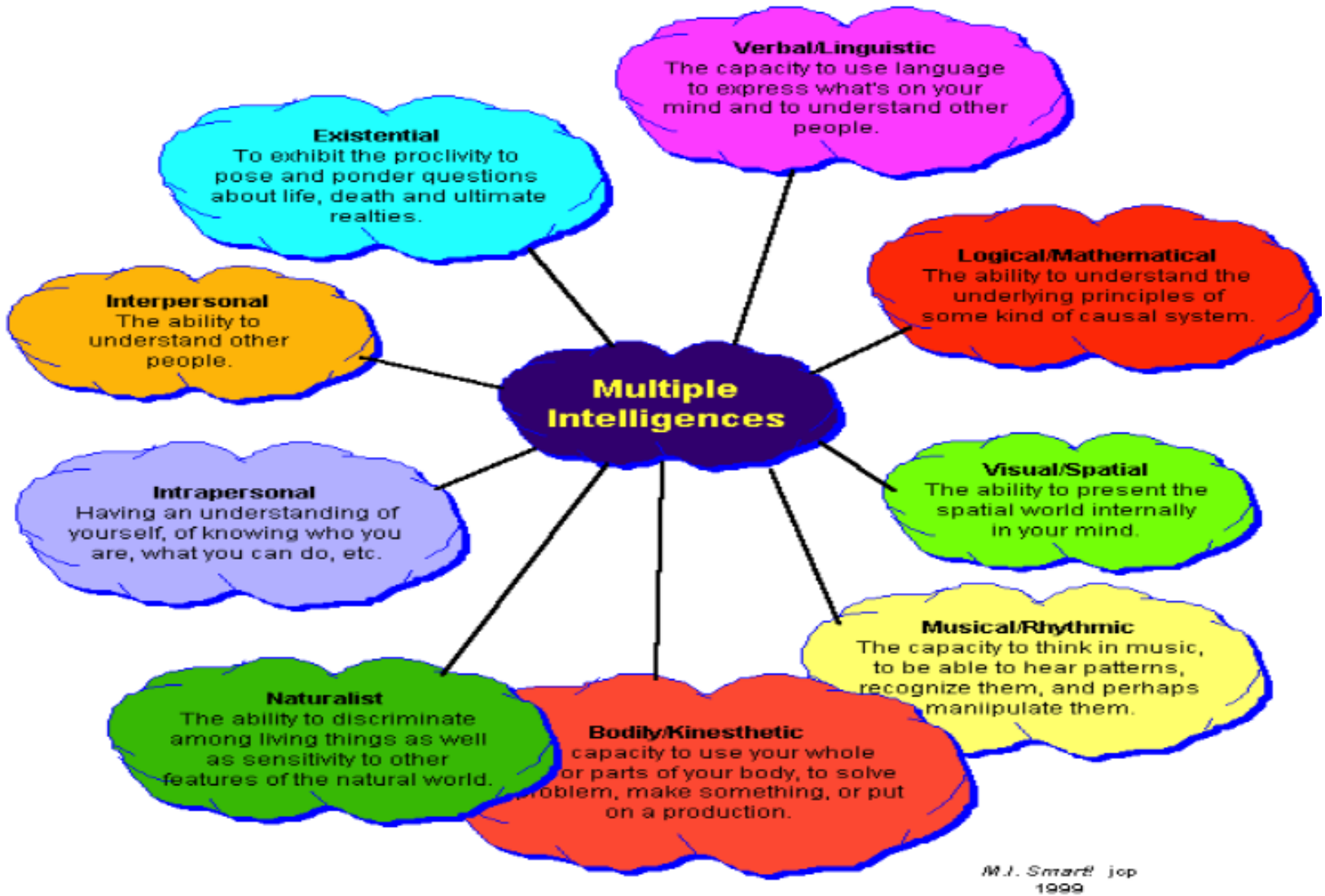
Project-Based Learning engages students in complex, real-world problem solving that:

- Empowers students as active learners
  - Students become practitioners using and demonstrating knowledge, not just storing it
  - Students negotiate project ideas and assessment criteria with teachers and community members
  - Teachers act as coaches and facilitators
  - Teachers encourage intellectual risk-taking

During PBL teachers/facilitators will:

- Provide opportunities for in-depth investigations of worthy topics
- Allow learners to become more autonomous as they construct personally-meaningful artifacts that are representations of their learning
- Motivate students by engaging them in their own learning

PBL affords students opportunities to develop Gardner's Multiple Intelligences, thus accommodating a wide variety of learning styles



Why should I do PBL?

- Provides opportunities for students to pursue their own interests and questions and make decisions about how **THEY** will find answers and solve problems
- Improves education for all students
- Facilitates student integration of the content of different subjects
- Teaches children to use their own minds well and applies what they learn in school to life-long endeavours
- Helps students to become technologically literate
- Establishes connections to life outside the classroom, addressing real-world concerns, and developing real-world skills
- Skills learned through PBL are those desired by today's employers

What are the benefits of PBL?

- Offers multiple ways for students to participate and to demonstrate their knowledge
- Accommodates different kinds of intelligences
- Shifts students away from doing only what they typically do in a classroom environment
- Encourages the mastery of technological tools, thus preparing them for the workforce
- Serves as a medium for students who don't usually participate
- Prompts students to collaborate while at the same time support self-directed learning
- Offers a learning experience that draws on the thinking and shared efforts of several individuals
- Helps students develop a variety of social skills relating to group work and negotiation
- Promotes the internalization of concepts, values, and modes of thought, especially those related to cooperation and conflict resolution
- Establishes a supportive and non-competitive climate for students
- Provides a means for transferring the responsibility for learning from teachers to students
- Calls upon students to explain or defend their position to others in their project groups, so that learning is more apt to be personalized and valued

PBL Instructional Design Components

PROJECT

1) Curriculum Design

-Simultaneous Outcomes:

~Content

~Standards

~Habits of Mind

What do I want my students to know and be able to do?

2) **Instructional Delivery - Incorporating the 6 A's of PBL**

-Teaching and Learning:

~Design Framework

~Design Tools

~Instructional Strategies

What instructional strategies will facilitate engagement and learning?

3) Assessment and Evaluation

-Collecting Evidence:

~Product

~Process

~Progress

What evidence will I accept of student progress and what will be the criteria for success?

The Six A's of Designing Projects

- Authenticity (#1)
  - Does the project emanate from a problem or question that has meaning to the student?
  - Is it a problem or question that might actually be tackled by an adult at work or in the community?
  - Do students create or produce something that has personal and/or social value, beyond the school setting?

The Six A's of Designing Projects

- Academic Rigor (#2)
  - Does the project lead students to acquire and apply knowledge central to one or more discipline or content area?
  - Does it challenge students to use methods or inquiry central to one or more discipline? (For example: thinking like a scientist)
  - Do students develop higher order thinking skills and habits of mind? (For example: searching for evidence, taking different perspectives, etc.)

The Six A's of Designing Projects

- Applied Learning (#3)
  - Does the learning take place in the context of a semi-structured problem, grounded in life and work in the world beyond school?
  - Does the project lead students to acquire and use competencies expected in high performance work organizations?
  - Does the work require students to develop organizational and self-management skills?

The Six A's of Designing Projects

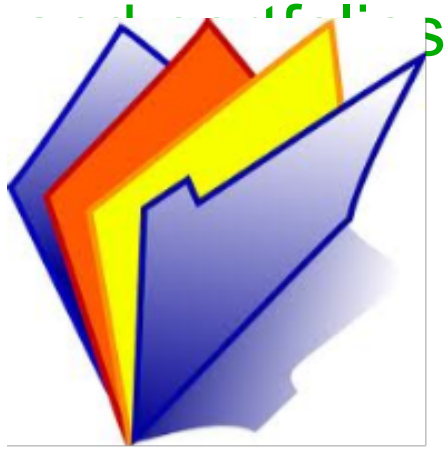
- Active Exploration (#4)
  - Do students spend significant amounts of time doing field-based work?
  - Does the project require students to engage in real-life investigation, using a variety of methods, media, and sources?
  - Are students expected to communicate what they are learning through presentation and/or performance?

The Six A's of Designing Projects

- Adult Relationships (#5)
  - Do students meet and observe adults with relevant expertise and experience?
  - Do students have an opportunity to work closely with at least one adult?
  - Do adults collaborate on the design and assessment of student work?

The Six A's of Designing Projects

- Assessment Practices (#6)
  - Do students reflect regularly on their learning using clear project criteria that they have helped to set?
  - Do adults from outside the classroom help students develop a sense of real-world standards for this type of work?
  - Will there be opportunities for regular assessment of student work through a range of methods, including exhibitions [illegible]s?



Assessment and Evaluation

- Judgment
- Knowledge (Mastery)
  - Tests / Quizzes / Reports / Recitations
- Understanding (Application of Knowledge)
  - Exhibitions / Demonstrations
- Reflection (Growth over time)
  - Portfolios / Journals / Observations

Key Assessment Questions

- What will I do to help students understand content, develop processes, and habits of mind?
- How will I pay instructional attention to helping students gain key knowledge and skills?
- How will I give useful ongoing feedback to students?

PBL Web Resources

Project Examples

- www.whatkidscando.org/index.asp
- http://itd.usd259.org/steps/pbl.htm
- http://www.edutopia.org
- www.bobpearlman.org/BestPractices/StudentWork.htm
- http://www.urbanplan.org/UP Home/UP Home fst.html
- http://www.nationalmathtrail.org/
- http://www97.intel.com/en/ProjectDesign
- http://www.thinkquest.org/

Project-Based Learning Resources

- www.bie.org/
- www.pblnet.org
- www.iearn-canada.org/guideontheside.html
- www.gsn.org/web/pbl/pedagog.htm
- http://www.ciese.org/currichome.html
- http://www.hightechhigh.org/resource-center/
- http://www.naf.org/cps/rde/xchg
- http://www.pearsonfoundatiopn.org/pg4.5.html

Key Evaluation Questions

- What will serve as evidence of learning in student work? (Processes & Products)
- Which assessment tools should be used?
- Is there an integrated evaluation, which ties processes and products/demonstrations together?