Center for
Excellence in Learning & Teaching

The Center for Excellence in Learning and Teaching

Introduction to Project-Based Learning

Dr. Abdel Karim Daragmeh

September 8، 2015

WORKSHOP OUTCOMES

By the end of today's workshop, participants will have:

- Demonstrated understanding of the process and challenges related to using project based learning course schemes,
- Discussed and reflected on the 8 key elements in project-based learning as they relate to their own courses,
- Set up and integrate projects in their own syllabus, and
- Reflected on and evaluate teacher and learner roles in project-based courses.

SESSION 1

PROJECT-BASED LEARNING

Why PBL???
21st century skills

Much learning outside class setting:
Readings
Team meetings
Data collection
Negotiating with community/market partner
Meeting customers
Making decisions
Report writing
Presentation skills
etc.

21ST CENTURY SKILLS

- Critical Thinking & Problem Solving
- Creativity & Innovation
- Leadership
- Computing and ITC Technology
- Career & Learning Self-direction
- TEAM Building

CREATING A LEARNING ENVIRONMENT

what is PBL?

- Students work in teams to experience and explore relevant, real-world problems, questions, issues, and challenges; then creating presentations and products to share what they have learned.

- **Project Based Learning** is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge. (1)

---

(1)http://bie.org/about/what_pbl

PROJECT DESIGN ELEMENTS

The 8 elements of PBL ????? (1)

- **Key Knowledge**- The project is focused on student learning goals, including standards-based content and skills

- **Authenticity** - The project features real-world context, tasks and tools, quality standards, or impact – or speaks to students' personal concerns, interests, and issues in their lives.

- **Sustained Inquiry** - Students engage in a rigorous, extended process of asking questions, finding resources, and applying information

- **Challenging Problem or Question** - The project is framed by a meaningful problem to solve or a question to answer, at the appropriate level of challenge

---

(1) http://bie.org/about/what_pbl

PROJECT DESIGN ELEMENTS

- **Student Voice & Choice** - Students make some decisions about the project, including how they work and what they create.

- **Reflection** - Students and teachers reflect on learning, the effectiveness of their inquiry and project activities, the quality of student work, obstacles and how to overcome them.

- **Critique & Revision -** Students give, receive, and use feedback to improve their process and products.

- **Public Product** - Students make their project work public by explaining, displaying and/or presenting it to people beyond the classroom.

PROJECT DESIGN PROCESS

Design Process

- Develop project idea
- Decide the scope of the project
- Select standards
- Incorporate simultaneous outcomes
- Work from project design criteria
- Craft the Driving Questions

PROJECT DESIGN
AUTHENTIC NEEDS

- Map your community
- Match what people do in their daily work.
- Tie the project to local and national events/ CURRENT TRENDS IN IT SECTOR.
- Focus on authentic community projects

PROJECT DESIGN
SCOPE OF PROJECT

- Duration
- Technology
- Outreach/FIELD WORK
- Audience- PARTNERS
- Partnership role

PROJECT DESIGN
SELECT OUTCOMES

What do you want your students to know and be able to do?

- No more than 3 standards per subject is best in shorter projects. Adjust accordingly for interdisciplinary or longer-term projects. Include at least one literacy outcome in your project.

- Do not plan for outcomes you cannot assess. Be clear about the standards that will be assessed and how the products will allow each student to demonstrate their learning.

SIMULTANEOUS OUTCOMES

Teachers incorporate more than academic outcomes into classroom activities

- **Specific skills** (being able to work in groups, manage projects, meet deadlines, present information, think critically, solve problems, use technology efficiently)
- **Habits of mind** (curiosity, flexibility, perseverance)

Sample project 1
Mobile apps

Project Description:

- Student teams will work on completing the design of authentic Android Application to be provided by local private companies. Each team will work on developing and delivering a complete Android application. The company tutor will help in giving the business case, requirements and specification to students and s/he will discuss design issues with them. Each group will give final project presentation starting from week 15. Both course teacher and company tutor will evaluate the projects according to pre-designed rubrics.

Sample project 2
Research methods

Description of the project

Student teams will be formed to work on **the design of supplementary materials for the English curriculum, grades 1-4**. Each team will work on designing material for one language component in the curriculum- reading, writing, listening, or grammar. The teams will coordinate their work with the grade teachers and English language supervisors in the public schools by having periodic interviews/meetings on results of curriculum analysis stage and periodic consultations on tasks and activities.

The teams working on the same grade curriculum will coordinate their work to ensure that no overlap occurs and that the materials designed by all teams can be put together in one book to be presented to the ministry of education district office at the end of the semester.

Activity 1

From Folder

SELECT COURSE

Give description of your course project

Define learning outcomes FROM THE PROJECT

Remember: NO OUTCOMES YOU CANNOT ASSESS

Session 2

Project integration in course design

MAP THE PROJECT: TASKS & ACTIVITIES

- Decide how to launch the project- orientation
- Share project goals with students- orientation
- Divide into subtasks/ problems
- Set due dates for tasks and activities
- Integrate tasks and dates into syllabus
- Use milestones
- Plan for evaluation and reflection

Project as a set of problems/tasks

- Community needs:

- Identify a Problem :

- Project based learning

- Problem learning

Sample project based courses
Project integration

- Research methodology- tasks
- Software project management- problems

ACTIVITY 3

Project phases and timeline

Small group work and facilitator coaching

Session 3

Teacher and learner roles

ROLES CHANGE

Students :

- feel responsibility for their learning
- Learn leadership skills
- Boost motivation
- feeling of accomplishment
- become successful life-long learners.

TEACHER AS COACH

- **Models/coaches/fades in:**
- Asking about thinking
- Monitoring learning
- Probing/ challenging students' thinking
- Keeping students involved
- Monitoring/ adjusting levels of challenge
- Managing group dynamics
- Keeping process moving
- Guide the students in their problem solving efforts.

COMPANY TUTOR ROLE????

DEFINE IN LARGE GROUP DISCUSSION???

HOW DO WE ENVISION TUTOR ROLE????

INCLASS AND IN COMPANY

DIFFICULTIES AND PROBLEMS FACED IN IMPLEMENTING PROJECT-BASED LEARNING

- Our undergraduate students have difficulties in the following areas:
  - In reality, usually students find it difficult to relate old knowledge and newly taught subjects;
  - They find difficulties in turning theoretical driven knowledge into computer applications or solutions;
  - They do not have enough confidence to present and defend their ideas and solutions;
  - They LACK SKILL IN analyzing and reviewing research papers, or written project, critically;
  - They are NOT VERY GOOD in writing skills such as writing report, papers and project documentation .

Questions for reflection????

- Who selects the PROJECT?
- Who defines the learning outcomes?
- When does the teacher solicit student input?
- Do the student and teacher negotiate learning outcomes?
- Who defines the products and activities?
- Who controls the timeline and pace of the project?

CLOSING & RECOMMENDATIONS