Designing a Collaborative Project: Intro to PBL Design

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Please sit with your group members!
One thing that you remember from yesterday?
Morning: Introduction to PBL
- Building a sound skeleton for PBL: Selecting PBL topic and identifying learning goal(s)
- Learning Activity Design
- Group work
- Uploading outputs on the UNESCO EC website
- 3 group presentation (10 minutes max)

-------- LUNCH--------
Agenda: Day 2

Afternoon: ICT-PBL Integration

- Intro to UNESCO ICT Resources
- Intro to examples of social media and hands-on activities
- ICT integration checklist
- Group works: Integrating ICT tools into an ESD lesson plan
- Uploading outputs on the UNESCO EC website
- 3 group presentations (15 minutes max)
In this session...

We will complete

1) Step 1.2 Refine the Topic and Outputs for the PBL
2) Step 1.3 Define Students’ Learning Objectives
3) Step 2 Write the Brief Description of Your Group’s PBL
4) Step 3 Select and Analyze the Participating Students
What is Project Based Learning?:

Elements of PBL

- Driving Questions
- Independent Research Process (Autonomy)
- Engagement, Collaboration and Communication
- Knowledge AND Skills
- Creation
1) Define learning goal(s) – your “question”
2) Expected outputs
3) Conduct context analysis
   - Student prior knowledge & ICT readiness
   - School facility
   - Curriculum
   - Inter-school collaboration possibility
What make a good project: CREATE

- Curriculum-based and contextualized themes
- Real-world issues
- Expert thinking needed
- Achievable and measurable results
- Team work
- Extending learning time and space beyond classroom boundaries
Step 1.3 Learning Objectives

* Interdisciplinary learning objectives:
  - Understanding and applying knowledge of the topic
  - Problem-solving, critical thinking
  - Information literacy
  - Communication and collaboration
  - Value/attitude

* Subject-specific learning objectives
Example:
**DESIGNING THE LAY-OUT OF THE SCHOOL GARDEN (Secondary)**

*In terms of Interdisciplinary school goal*

*conduct research

*use the materials and resources to get the data and information for school garden design

*In terms of specific subject goal*

1) **Objectives related to Biology:**

*Understand that plants are diverse and rich in species

*Understand that each plant is suitable only for a certain type of land and for a specific climate condition.

*Explain the characteristics of plants in accordance to their habitat.
2) Objectives related to Mathematics:
* Calculate the data related to area, density and coverage.
* Calculate the cost of the design and make the cost estimate of the real school garden.

3) Objectives related to Fine Arts:
* Locate the certain location of certain types of plants to ensure the overall aesthetics.
*
Step 1.3 Learning Objectives

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating
A school garden is very important for students to study biology, geography, art, etc. In this project, students learn how to design the lay-out of the school garden. They will study biological features of plants suitable for the local environmental conditions, and calculate the area, density and cost.

Using knowledge learned, students act as the architect designing the lay-out of the school garden of the other school in the project, and submit to the school managers and those interested. The project is presented in the form of a multimedia presentation or a detailed design of the lay-out presented in a seminar on the project before the school board and those interested in the project.
Example:

Online Tour to Our Tribal Heritages
Students from … school A, school B, and school C will design a website on local heritages. The website should include the content on and provide functions including …; through producing the website and online discussion, the students from different tribal backgrounds are expected to gain intercultural understanding on … and learn how to appreciate … and live together with…
Step 3. Select and Analyze Participating Students

1) Selecting participating students
- Grade level, language, ICT level, interest, etc

2) Plan the student grouping strategies

3) Analyze necessary skills to be prepared before or during the PBL process
Thank you...

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Empirical Evidences (3)

• Meta-analysis of 10 studies at elementary or secondary levels (3,029 K-12 students)
• Students in collaborative groups do better in achievement tests than those in traditional instruction.

| Simple tasks | 13 percentile gain academically for students achieving at 50% percentile |
| Complex tasks | 10 percentile gain academically for students achieving at 50% percentile |

➢ **Free-riders or hitchhikers** - less effort from others (lack of motivation) [Kerr & Bruun, 1983]

➢ **Social loafing** – less effort from others (anonymity, profiting from others) [Latane, Williams, & Harkins, 1979]

➢ **Sucker effect** – more productive members exert less effort (non-support to non-contributing members) [Kerr, 1983]
Some Precaution!
What Collaborative Learning DOES not automatically offer?

- Automatic social interaction – *just because environment permits*

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- Holistic learning – *interaction restricted to cognitive learning*

Adapted from: Kreijns et al. (2003), Computers in Human Behaviour 19, Elsevier Science Ltd. pp.342-343

Seng et. al., Fostering scientific inquiry in schools through science research & CSCL, NIE Singapore (Abstract available on http://www.inderscience.com/info/inarticle.php?artid=6518)

Hotseat mobile learning (Purdue University) http://www.purdue.edu/newsroom/research/2010/101013BowenEducause.html

Facebook Open Hours (Stanford University) http://www.facebook.com/stanford?fref=ts
References


CCSC (2010) “Using PLTL to assist in Retention in Computer Science Classes” (p169)


Kreijns et al. (2003), Computers in Human Behaviour 19, Elsevier Science Ltd. pp.342-343


Seng et. al., Fostering scientific inquiry in schools through science research & CSCL, NIE Singapore (Abstract available on http://www.inderscience.com/info/inarticle.php?artid=6518)
Learning Outcomes

Comparative grades of Chemistry students exposed to PLTL during Chem6 Class (2001-2005) at Penn State Schuylkill

- Communicating ideas to others
- Working with others
- Problem solving


Originally published in Progressions: The Peer-Led Team Learning Project Newsletter, Volume 6, Number 1, Fall 2004.

<table>
<thead>
<tr>
<th>Table 6. SALG survey data for Fall 2003 and Spring 2004</th>
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<tr>
<td>What helped your learning in Chem 12 the most?</td>
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<tr>
<td>Chem 6 students only [n=34]</td>
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<tr>
<td>- Workshop problems in Chem 6 (4.18)</td>
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<tr>
<td>- Teamwork and interactions with peers in Chem 6 (3.91)</td>
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<tr>
<td>- Working with peer leaders in Chem 6 (3.73)</td>
</tr>
<tr>
<td>All students [n=45]</td>
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<tr>
<td>- The grading system used (3.73)</td>
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<td>- Quality of contact with the teacher (3.58)</td>
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<td>- Feedback received on graded activities and assignments (3.53)</td>
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<tr>
<td>- How class activities, labs, reading, and assignments fit together (3.53)</td>
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<tr>
<td>- Group work in class (3.52)</td>
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"How much has this class added to your skills in the following?"

All students [n=44]
- Communicating ideas to others (3.59)
- Working effectively with others (3.48)
- Solving problems (3.30)

"To what extent did you make learning gains in the following?"

All students [n=45]
- Working effectively with others (3.58)
- Communicating ideas to others (3.53)
- Solving problems (3.49)

"What will you remember and carry with you to other classes?"

All students [n=45]
- Communicating ideas to others (3.84)
- Working effectively with others (3.80)
- Ability to think through a problem or argument (3.64)
Outlines

- Project overview: why, what and how?
- The Flow of the Workshop
- Q&A
Nothing can substitute for a good teacher.

Computers aren’t magic, but teachers are.

(Craig R. Barrett, Former CEO, Intel Corporation.)
Project Overview

At a Glance

- Project Title: Facilitating ICT-Pedagogy Integration
- Time Frame: Three years (2010 – 2012)
- Funding source: Korean Funds-in-Trust
- Target Groups: School students and teachers, teacher education institutions and teacher educators; Education Specialists in UNESCO Field Offices
Nine countries, 136 schools, 102 TEIs and 365 teachers & TEs
Expected Outcomes

- Teachers’ capacity
- Principal’s leadership
- Partnerships between teachers and teacher educators
- School-based curriculum packages
Overall Goals

Exploring effective models of using ICT to support student centered pedagogy and promote higher-order thinking

Interdisciplinary

Interschool

Intercultural
Welcome!

(NOTE: This website is viewable using any browser, but best viewed using Firefox or Chrome).

The ICT in Education Programme of UNESCO Bangkok is proud to host the Asia-Pacific Education Community portal (EC). This site serves as the main platform for UNESCO’s workshops on Project-Based Learning (PBL), with the purpose of facilitating telecommunications and collaboration across spatial and temporal boundaries.

The EC portal enables educators from around the world to network with one another, seek and share advice, and join or form groups to work together on international projects. It is a free resource accessible to all involved with education.

What you can do

**Forums**
The portal provides a series of interactive forums where all can share their opinions, discuss topics, and request information. Participants can request guidance on best practices in the classroom, finding online resources, developing solid research-based pedagogy, problem-solving educational issues, and more.

**Resources**
Participants are able to review and exchange teaching materials, such as lesson plans, training guidelines, and toolkits, through UNESCO’s online offerings as well as resources developed by fellow educators.

**Groups**
The groups function allows users to join existing communities as well as create new meeting spaces for like-minded individuals to share experiences and resources. Participants also benefit from the possibilities of expanding their networks, publicizing events, meeting interesting people, and building partnerships.
• March 5 – July 25, 2012
• Teachers and students from Canada, China, Republic of Korea, the Philippines, Malaysia, and Bangladesh.
• Three phases:
  1) Phase 1: Digital story (within school)
  2) Phase 2: National project (beyond school within country)
  3) Phase 3: Multi-national group project – Weather calendar project

For more info: http://unescokisp.wikispaces.com
Useful Resources

- UNESCO Education Community
- KISP Wikispaces: http://unescokisp.wikispaces.com
- British Council Schools Online
  http://schoolsonline.britishcouncil.org/

- Publications to come:
  - KISP Research Report (Dec 2012)
  - A Guidebook for PBL and Telecollaboration (Jan 2013)
Flow of the Workshop

• Day 1:
  - Opportunity to listen to KISP main actresses!
  - Getting familiarize with EC website.
• Day 2:
  - PBL for ESD/EFA (Group work/presentation)
  - How to integrate ICT to enhance PBL
• Day 3:
  - How to design assessments for PBL
  - Group work/consultation/finalization of PBL design
  - Group presentation and Q&A
Thank You!!

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