Empowering Collaboration in Asynchronous Problem-Based Learning

OLC Innovate Conference March 30, 2022
Agenda

1. Introductions
2. Problem-based Learning (PBL) at SPS: designing for professionals
3. Educational Technology Strategy supporting activity design
4. Student Data Insights leveraging data for improvement
Introductions: about your presenters

Domi Enders
Associate Director
Learning Resources and
Academic Technology

Camilo Irizarry
Instructional Designer

Cassandra Scannella
Instructional Designer
Introductions: About Columbia University’s SPS

Knowledge with purpose

To advance, adapt and accelerate careers

Through specialized programs taught by leading educators and leading-edge practitioners, SPS students gain the skills and support they need to move their careers, communities and industries forward.

LEARN MORE
Problem-based Learning (PBL) at SPS: designing for adult professionals
PBL at SPS: *What is Problem-based Learning?*

**Traditional Learning**
- Students are given the information they need to know.

**PBL**
- Students are assigned a problem they need to solve.

**Steps**
1. Students are asked to memorize the information.
2. Students must identify the needed information.
3. Students learn the information and apply it to solve the problem.
Problem-based Learning (PBL) at SPS

Master’s of Science in Insurance Management

Master’s of Science in Wealth Management
PBL at SPS: Top Administration and Teaching Challenges

Program Directors
• Balancing administrative work with teaching
• Ensuring student progress and satisfaction

Faculty/Lecturers
• Lack of teaching experience
• Creating and managing course interactions
• Time management: full-time job, personal obligations, designing and delivering a brand new course
• Monitoring and evaluating group work
PBL at SPS: Top Learning Challenges

Students

• Time management: work, home, school
• Collaborating synchronously to work in groups across time zones
• Collaborating within a range of professional experience levels
  • Pros and cons
• Differentiating academic and professional learning environments
PBL at SPS: *Instructional Design Strategy*

Key characteristics of our PBL framework:

1. Flexibility/adaptability of PBL
2. Design for group work
3. Provide opportunities for interaction and formative peer-to-peer evaluation
4. Evergreen design to accommodate different teaching styles going forward
PBL at SPS: The PBL Framework

★ **Part 1:**
Brainstorming the problem

★ **Part 2:**
What are the resources/research that address the issues?

★ **Part 3:**
Assessing the evidence

★ **Part 4:**
Deliverable/Solution to Problem
Group Activity

Empowering Collaboration in Asynchronous PBL (OLC Presentation)
To complete this activity, please answer the following prompts below. You don’t have to answer all of these. Feel free to choose what suits you best!

- Do you have asynchronous course experience? To what extent?
- What excites you the most about online learning? What scares you most?
- What are your initial thoughts on PBL? Have you designed or taken a course using PBL?
- What tools have you used for online collaboration?
- Did you have a different opinion of online learning prior to the pandemic? If so, how does it differ now?
PBL at SPS: *Educational Technology Strategy*

Support PBL course priorities with technology

- Synchronous and asynchronous collaboration
- Individual and group reflection
- Peer-to-peer evaluation

Technologies deployed in our LMS to support PBL:

- **Padlet** (synch/asynch collaboration in a shared workspace / digital wall)
- **FeedbackFruits | various tools** (peer review, reflection, self-assessment)
- **MIRO** (synch/asynch collaboration in a shared online workspace / digital whiteboard)
- **Google Docs** (group work)
- **BigBlueButton and GoogleMeet** (synchronous web conferencing)
Educational Technology Strategy: **Padlet**

**Group-based research**

**Synchronous/asynchronous workspace**
Educational Technology Strategy: FeedbackFruits tool suite

Canvas LMS integration:
- LTI/API
- Accessibility Compliance
  - WCAG 2.0 Level A compliance: 92%
  - WCAG 2.0 Level AA compliance: 85%
Educational Technology Strategy: FeedbackFruits

Group Member Evaluation

- Peer Review (group members)
- Evaluation Focus
  - Communication Style
  - Work Ethic and Teamwork
- Give/receive professional feedback
- Review using a collaboration rubric
- Three assignment steps:
  - Self-assessment and (anonymous) peer review
  - Peer feedback review
  - Individual reflection
Educational Technology Strategy: FeedbackFruits

Group Member Evaluation: student challenges (focus group feedback)

- “My peers are my professional colleagues. I am concerned about affecting our professional relationship going forward.”
- “I know you said that the assignment doesn’t count towards our project grade, but how is it possible for the professor not to be influenced by what we say?”
- “It’s impossible to truly remain anonymous when we evaluate. We all know each other’s communication style by now, so we know who says what.”
Individual Evaluation of Group Work

- Peer Review (group performance)
- Evaluation Focus: 4 criteria (versus 8 previously)
  - Communication
  - Teamwork
  - Collaboration
  - Interpersonal Skills
- Give/receive constructive professional feedback
- Feedback anonymity
  - Anonymous (assignment #1)
  - Not anonymous (assignment #2)
FeedbackFruits | Student Data Insights: enabling iterative design
Student Data Insights

Overall student progress

15 out of 21 students have completed this

12 average number of comments per group

208 min average time spent per review

Statistics per active student

Name | Read Instructions | Finished self-assessment | Give feedback
--- | --- | --- | ---
Group 1 | ✔️ | | 
Group 3 | ✔️ | ✔️ | 
Group 5 | ✔️ | ✔️ | 
Group 4 | ✔️ | | 
Group 2 | ✔️ | |
Student Data Insights

Assignment #1 outcomes

Percentage of students who completed the self-assessment: 90%
Percentage of students who completed peer reviews: 90%
Percentage of students who read their feedback: 47% too low
Percentage of students who completed reflections: 42% too low
Group scores for communication and work ethic/professionalism: 71% to 100%
Student Data Insights

Assignment #2 outcomes

Percentage of students who completed the self-assessment: 95% increase from 90%!
Percentage of students who completed peer reviews: 95% increase from 90%!
Percentage of students who read their feedback: 79% increase from 47%!
Percentage of students who completed reflections: 79% increase from 42%!
Group scores for communication and work ethic/professionalism: 86% to 100%
“I learned that the actual work is half of every project, and the other half is learning how to work together.....”
“Having to provide such specific feedback in different categories was challenging to me. It was difficult to find a way to put people on a scale and rank them based on the work they did, or how they did it.”
“Everyone contributed to the work product.”

“We were able to get a handle on our respective work styles and personalities successfully and as a result were able to develop quality deliverables.”
Q&A/Open Discussion
Evaluate Sessions and Win!

• Navigate to specific session to evaluate
• Select “Evaluate Session” on session details screen
  • Complete session evaluation*

*Each session evaluation completed (limited to one per person per session) = one contest entry. **Five (5) $25 gift cards** will be awarded.