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Improving Student Learning Outcomes: Lesson Study

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Improving Student Learning Outcomes: Lesson Study

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SoTL Commons March 28, 2013
Lesson Study

Japanese Lesson Study
“A model for intensive, school-based professional development used in Japan” (Stepanek et al 2)
Lesson Study

Process

Big Ideas

Habits of Mind

Setting Goals

Planning the Lesson

Teaching, Observing, and Debriefing

Content

Goals

Students

Research Stance Learning Together Self-Efficacy

Instruction

Students

Reflecting and Sharing Results

Revising and Reteaching

Instruction

Goals

Setting Goals

Planning the Lesson

Teaching, Observing, and Debriefing

Lesson Study: Developing the Team

- Disciplinary Teams
- Interdisciplinary Teams
Lesson Study

- Research Theme
- Unit Goals
- Lesson Goals
Lesson Study

• Identifying Student Qualities
  – Ideal Student Qualities
  – Actual Student Qualities
  – Research Theme

<table>
<thead>
<tr>
<th>Ideal Student Qualities</th>
<th>Actual Student Qualities</th>
<th>Research Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solvers</td>
<td>Have difficulty applying what they know</td>
<td>To engage students in learning how to learn and apply what they know to new situations.</td>
</tr>
<tr>
<td>Proficient with technology</td>
<td>Written communication unsatisfactory</td>
<td></td>
</tr>
<tr>
<td>Lifelong learners who understand how to learn</td>
<td>Lack metacognitive skills</td>
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</table>
Lesson Planning

Traditional
Cover Material
Teacher-Centered
Course Specific

Lesson Study
Uncover Material
Student-Centered
Research Oriented
Lesson Objective

Goals or Objectives Should

• Be student-centered
• Require higher-order thinking
• Have measurable outcomes
• Be concrete, rather than vague or abstract
Sample Learning Goals

• Learning goals
  • Our goal was to develop students who critically, skeptically and thoroughly evaluate sources and articulate the benefits of spending time on this kind of activity. We want students to be able to apply what they learned from this lesson more broadly in their major discipline and in their pursuit of knowledge beyond college. We want students to be able to critically think about and evaluate the credibility of information that they gather in future research endeavors. The value of this lesson crosses many disciplines and has applications beyond the classroom.
  • Our lesson promotes the achievement of these goals by actively engaging students in an authentic, hands-on, real-world application of data-gathering, an exercise that we felt met the definition of "active learning" as defined by Prince (2004). This applies to data-finding activities that students will engage in as writers, communicators and journalists. Because students report that technology delivers major academic benefits (ECARS, 2011), we also included technology as a part of this classroom activity.
Writing the Lesson Plan

Learning Activities: Possible instructional activities, key questions students will explore, scaffolding to meet the needs of all learners

Expected Student Reactions: Prior knowledge of students, difficulties students have with topic, How might students respond

Teacher support: How can we make the task more or less complex without undermining the goal?

Evaluation: How will we assess student learning?
1. How will you know students have learned?

2. What evidence do you need?

3. What form can this evidence take?

4. How can you use the evidence to improve student learning?
Research Lesson Plan

1. What is our research question or hypothesis?
2. How does our lesson design support the goals of the research lesson?
3. Have we anticipated student responses based upon our experience?
4. What kinds of prior knowledge of the topic should students have?
5. How will the instructor respond to student reactions and misconceptions?
6. What kinds of evidence would be sufficient for demonstrating student understanding?
7. Do we have a plan for evaluating the lesson?
<table>
<thead>
<tr>
<th>Steps of the lesson: learning activities and key questions (and time allocation)</th>
<th>Student activities/expected student reactions or responses</th>
<th>Teacher’s response to student reactions / Things to remember</th>
<th>Goals and Method(s) of evaluation</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-quiz: Previous Class*</td>
<td>Students won’t know answers. Won’t be able to articulate their answers.</td>
<td>Write up report</td>
<td>To find out what students know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anticipated student responses: reference list, quotation, finding sources, filler</td>
<td></td>
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<tr>
<td></td>
<td>Students will be able to label some, but may have difficulty explaining why they are effective/ineff.</td>
<td>Instructor writes responses on board with positive remarks to keep them coming. After students are done, instructor summarizes the concept of integrating sources. Instructor will define key terms like signal phrase, attributor.</td>
<td>Instructor will encourage students to consider their responses and to complete the paragraphs in timely fashion.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students may say many quotes, longest, used all three sources.</td>
<td>Instructor will elicit more from students to help them articulate why examples are effective or ineffective.</td>
<td>Instructor will encourage all students to share their paragraphs by reminding students that these are drafts.</td>
<td></td>
</tr>
</tbody>
</table>
Observing the Lesson

- Build opportunities in the lesson to observe student interactions
- How do the students respond to the lesson
- Focus on how the LESSON worked
• 3-2-1 Reflection Activity:
  – Write 3 big ideas that you have taken away from this lesson study project
  – Write 2 points you will continue to ponder.
  – Write 1 action you will take immediately.
Final Lesson Study Guidelines

– Background
– The Lesson
– The Study
– Appendix

• https://wiki.ucfilespace.uc.edu/groups/lessonstudyresearchinstitute/
Developing SoTL Presentations

• Use your lesson study participation experience to develop a SoTL presentation.
  - Plan a presentation on how you designed and implemented a lesson plan and then used peer observations, student responses and scholarly resources to revise it.

• Develop and implement a lesson plan for fall semester and gather quantitative and qualitative data to determine the impact of lesson plan on SLO’s.

• Plan on applying for IRB approval and completing ethical research training.
Bill Cerbin argues “because it embodies all five elements of teaching—vision, design, interactions, outcomes, and analysis—lesson study is an ideal context in which to document teaching improvement” (116).