Lesson study: Teachers use of student assessments to inform reflective practice

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A Javits Gifted and Talented Students Education Program (Grant: 84.206A) to identify and serve underrepresented students of above average Ability, Creativity, and Task Commitment

http://www.csus.edu/indiv/j/jelinekd/ACT/ProjectACT%20%20Cover.html
Project Goals

- To improve GATE identification processes
- To provide a professional development series for classroom differentiated instruction strategies, which is readily replicable in other school districts
- To offer additional educational opportunities for underrepresented or underserved students
Year 1

- Davis Unified School District

- ATS summer GATE component-examine gifted identification to program outcomes

- Focus on differentiation
Year 2

- Davis and Sacramento school districts (Equity Network from CSUS to include underrepresented students)
- 9 teams from 4 school districts
- 2 Day Training with Sternberg’s Successful Intelligence focus
- Teachers designed assessments (pre/post) focused on analytical, creative, practical intelligences
Year 3

- 2 Sacramento school districts
- Focus on formative assessments and evidence of student learning
- How do teachers use assessments in designing lessons?
- Focus on sustainability of lesson study
Features of Lesson Study

- Focused on teacher-generated goals
- Thoughtfully planned in collaboration with others including teachers or content specialists
- Observed by other teachers and specialists
- Data collection and/or record keeping for analysis and reflection
- Discussed by lesson study participants

(Lewis & Tsuchida, 1998)
Lesson Study Cycle

Plan Design
- Identify Goals
- Unit Plan Balancing Triarchic Abilities
- Design a “research” lesson

Try Out Lesson(s)

Feedback
- Collect Evidence
- Team Observations
- Peer Review
- Revise Design

Review & Improve
5 Step Lesson Design Process

- Student Learning Profiles
- Narrowing the Gap (Id goals)
- Evidence of Student Learning
- Unit Design
- Lesson Design
Student Learning Profiles

What are the demographics of the community? (geographic location and population of the community and school, the socio-economic profile, race or ethnic breakdown, any other factors)

Key factors about your classes that will influence your planning and teaching. (Academic development, Language development, Social development, and Socio-economic and cultural context.)
Narrowing the Gap

Think about your students in terms of analytical, practical and creative thinking. What characteristics of these thinking abilities do your students currently display?

What gaps do you see between acquiring a balance of these three thinking skills and how children are actually developing in your classes?

Discuss these gaps with your group. Write a group goal related to narrowing the gap.

Provide a Narrative Overview of a unit that will help you achieve that goal.
Evidence of Student Learning

- What **diagnostic assessments** will you use to assess prior knowledge; practical, creative & analytical skills; and misconceptions?
- What **formative assessments** will you use to inform student understanding **throughout** the unit?
- What **summative assessment(s)** of student learning will you use? What do you expect these summative assessments to tell you in terms of student understanding and inquiry skills?
- What specific criteria will you use to evaluate student understanding and inquiry within the 3 domains of analytical, creative & practical intelligence?
# Unit Design

## Step 4: Design Your Instructional Blueprint

<table>
<thead>
<tr>
<th>Lessons</th>
<th>Content &amp; Performance Objectives</th>
<th>Essential Questions</th>
<th>Instructional Strategies and Learning Tasks to Support Successful Intelligence</th>
<th>Formative Assessments</th>
</tr>
</thead>
</table>
| Oreo Cookies | Students will understand that sedimentary rocks are formed from layers of rocks, dead plants, animals or sand. | - Where do the sediments come from?  
- How are the layers formed? | Sequence the events of a sedimentary rock being formed.  
(Paragraph or drawing/labeling) | Connect the comparison of vanilla Oreo cookie to sedimentary rock samples.  
Journal Write – Create a story of a sedimentary rock being formed. |
| Rock Simile | Students will understand that rocks are a mixture of minerals sitting next to each other, not chemically bound to each other. | - What are rocks made of?  
- Compare the relationship of rocks and minerals to everyday items. | Brainstorm 3 similes in a group that represents the relationship between rocks and minerals. | Students will write similes about rocks. |
| Every Rock Tells a Story | Students will understand the properties and formation of the 3 different rock types. | - What are the unique properties of rocks?  
- What are the methods of rock formation?  
- How does a rock reveal its story of formation? | Organize thoughts through note taking as story, If you are a Hunter of Fossils, is being read.  
Illustrate the life of the rock and tell a collective narrative with your group. | Write a story of the life of the rock, explaining the formation.  
Story and drawing of the story of the rock. |
Lesson Design

- **Purpose** *(Why are you teaching this lesson? How is this study lesson related to the lesson study “gap” and “goal(s)”?)*

- **Objectives**

- **Procedures**

- **Differentiation (Successful Intelligence)** *(How will instruction be differentiated to balance analytical, creative and practical activities?)*

- **What Should Observers Be Looking For?** *(What evidence will help you know students achieved the objectives for this lesson?)*
Pre Conferencing

- **Pre Conference Questions** - Discuss objectives, evidence of student learning to be gathered, challenges, differentiation, etc.

- What have your diagnostic assessments told you about students’ prior knowledge and preconceptions that may influence this lesson? How have you modified your original plan to account for this?

- 1 team used CST scores from previous years as diagnostic

- 1 team stated that, “Students understand prefixes but not necessarily root words”
Post Conference

Post Conference Questions - Discuss observations, evidence of student learning, revisions for next lesson.

- How can you use observations and student data to improve your instruction?
Objectives of Study

- Examine paired differences in student achievement pre to post lesson study participation (Teacher designed assessments)

- Compare lesson study to non lesson study participant assessments to determine the relationship on student learning

- Examine teacher perspectives on their lesson study processes and utilization of Sternberg’s Triarchic Intelligence relative to student achievement
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Average Percent Differences
Pre to Post Lesson Study
Lesson Study Compared to Non Lesson Study participation
Teacher Perspectives on most important features of lesson study - Year 2
Teachers Use of Assessments
Year 3 Survey Data

“How have your views of assessment changed because of your participation in lesson study?"

- Assessment as a process (pre, formative, post)
- LS as time to examine teacher designed, not mandatory assessments
- Importance of diagnostic assessment to design lessons
- Backwards mapping- looking at goals or CST’s first, then plan
Future Direction of Project Year 3

- Compare participants to non participants using standardized tests to examine impact of lesson study on student achievement
- Support teachers in understanding and using student assessments to improve instruction
- Sustainability of lesson study without grant support