UCLA IMPACT

Classroom Observation Rubrics for Secondary Mathematics, Secondary Science and Early Child Education

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Dr. Jaime Park, Dr. Imelda Nava and Dr. Helen M. Davis
University of California, Los Angeles
Graduate School of Education and Information Studies

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UCLA IMPACT

- 18 month credential and Masters program
- Residency program from September to June
- Focus on urban environments and social justice
- Each Apprentice is assigned to a mentor teacher
- Faculty advisors provide field support and facilitate trio-meetings with apprentices and mentors
- 1st year of the program implementation

Evaluation of Quality Teaching

The UCLA IMPACT: Urban Teacher Residency research team is using multiple measurements to evaluate quality teaching:

1. PACT – Performance Assessment for California Teachers
2. IQA – Instructional Quality Assessment
3. Value Added
4. Pedagogical Content Knowledge (MKT and ATLAS)
5. Logs
6. Observation Rubrics
7. Surveys
8. BTSA Induction
9. Student Survey (TRIPOD)

Learning Goals and Agenda

- How we developed the tool: classroom observation rubric for evaluation of quality teaching in urban schools for secondary math and science and early childhood education
- Practice using the observation rubric
- Reflecting on the observation rubric
- How faculty advisor use the observation rubric
- What did we learn from the data we got from using the observation rubric
- Discussion

Rationale for Equity-based Classroom Observation Rubric for Urban Teachers

We wanted to create a developmental tool that captures equity-based teaching practices.

Existing research and tools don't focus on classroom instruction and there is no tool to measure teacher candidate's progress on teaching.

- Current need for teacher evaluation
- Published content evaluation tools are limited
  - ECE's tool: ECCERS and CLASS
  - Secondary Math and Science: PACT, IQA, CA/National teaching standards

Mixed Methods Approach

- For ECE, I used a mixed methods approach to develop the rubric
- Be able to to measure progress over time and also capture the richness and detail of what the progress looks like
  - Observation notes (qualitative)
  - Four Point Rubric (quantitative)
- We are beginning to understand teacher candidate's progress

Methods – Early Childhood

- Pilot cohort of 10 Master's level students
- Preparing for California Early Childhood Permit
- Data:
  - Average of 3 classroom observations for each student for Fall and Winter quarters 2011
  - 1-2 pages of typed notes per visit
  - FA takes notes on the computer in real time, separating objective description and interpretive comments
- Feedback process: FA and apprentice debrief over the notes immediately afterwards (also using mentoring approaches from cognitive coaching)

Process – Early Childhood

- Development of Rubric
  - Observation rubric conceptual domains and categories developed from:
    - California ECE Competencies Draft
    - NAEYC Developmentally Appropriate Practice (2010)
    - California Preschool Foundations and Framework
  - ECE education focuses on development and learning. The field of ECE has long included consideration of culture, difference, and families.
  - Field note analysis:
    - Culled notes for observable characteristics of novice teachers

Trends in ECE Apprentice Learning

- Apprentice development does not always take the pathway that I expected.
  - First skills are individual relationships and appropriate language and individual relationships with the challenging children (!)
  - Doing *for* children vs. respecting "*the gift of struggle*"
  - Questions and requests before firm tones and expectations
  - Overly teacher-directed group and activity times
  - Subject matter content before development and learning
    - "There is no teaching going on." "When are children taught math concepts?"
  - Lowest priorities are routines and structures and working with their team.
  - Most difficult skills are language that expands concepts, decontextualized discourse, and recognizing teachable moments

Challenges- Early Childhood

- Hard to measure teacher progress because of the many contexts: 1-on-1, free choice time, small group, whole group, routines, developmental knowledge, etc.
- The apprentice works within a team in a lead teacher's classroom.
- Difficult to correlate the professional guidelines with measurable outcomes

Process – Math and Science Observation Rubrics

Participants – Faculty Advisors with feedback from research team

Understanding the dimensions:

- Content Rigor
- Content Discourse
- Equitable Access to Content
- Classroom Ecology

Mixed Methods Approach

- In Math and Science, the mixed methods approach was used in feedback to apprentices.
- Be able to capture the richness but be able to quantify progress over time
  - Observation notes (qualitative)
  - Four Point Rubric (quantitative)

"With the rubrics, I saw how first year teachers were developing because we had a framework for understanding our observation notes" (-Imelda)

Practice using the observation rubric:

- Understanding the dimensions:
  - Content Rigor
  - Content Discourse
  - Equitable Access to Content
  - Classroom Ecology
- Understanding the applications

THINK PAIR SHARE

QUESTIONS/ PROMPTS	WHAT I THOUGHT	WHAT MY PARTNER THOUGHT	WHAT WE WILL SHARE
Which of the 4 dimensions does the teacher candidate demonstrate?			
How might you use the rubrics with this teacher candidate?			

How faculty advisors use the observation rubric

Observation rubrics are used to support the development of quality teaching

- Observation rubrics are coupled with detailed observation notes are shared
- Debrief notes and rubrics with teacher candidates, and if possible with mentors (email all parties)
- Observe multiple times (3-4 times/10 weeks)
- See example

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Teaching Dimensions	Contemplating Level 1	Emerging/Applying Level 2	Integrating Level 3	Innovating Level 4	Examples of instructional strategies
			Mathematical Rigor		
Instructional Focus of Mathematical Task	There is no instructional focus or limited one-dimensional focus (e.g., solely on memorizing facts, rules, formulas, or definitions.)	Instructional focus is primarily one-dimensional with vague or little connection between mathematical concepts and different representations. Low level, primarily procedural/ memorization of steps/facts that have little connection to understanding the mathematical concept. Focus on producing correct answer.	Instructional focus is clear and includes high-level tasks (doing mathematics, non-algorithmic thinking, procedures with connections) but focus is producing the right answer.	High level tasks that includes complexity, presses for generalizations across cases, strong connections between multiple strategies/representations, conjectures with evidence and explanations for conclusions.	• Pressing for accuracy (AL terminology) • Prior knowledge • Pressing for reasoning • Getting students link ideas
Implementation of the Task	Teacher delivers inaccurate math OR Teacher teaches non-math content.	Teacher focuses primarily on the procedural knowledge of the problem regardless of the intentions of the original task OR Teacher does the complex thinking for the students.	Teacher engages some students in some complex thinking using high-level tasks, questions, strategies, and feedback.	Teacher engages Students in the complex thinking using high-level tasks, questions, strategies, and feedback.	• Evaluating strategies • Connecting ideas across methods/ representations • Point to key info.
Engaging Students in Learning	Students have little or no opportunity to engage with content in ways likely to improve their understanding of mathematical concepts, procedures, and reasoning.	Strategies for inefficient engagement offer opportunities for students to develop their own understanding of mathematical procedures.	Strategies for inefficient engagement offer structured opportunities for students to actively develop their own understanding of mathematical concepts, procedures, or reasoning.	Strategies for inefficient engagement offer structured opportunities for students to actively develop their own understanding of mathematical concepts, procedures, and reasoning.	• Think, Pair, Share • Testing conjectures • Practicing problems • Poster presentations
Checking for Understanding	Teacher is not monitoring student progress in the lesson.	Teacher is monitoring student progress but does not change or adapt instruction to address the student needs based on information gathered.	There are multiple opportunities using various strategies to monitor student progress throughout the lesson and this information is used to make instructional decisions during the lesson but it may not always further students' mathematical understanding.	There are multiple opportunities using various strategies to monitor student progress throughout the lesson and this information is used to make sound instructional decisions during the lesson to further students' mathematical understanding.	• Error analysis • Consensus • Justifications • White boards/thumbs up
			Mathematical Discourse		
Teachers discourse: *Questioning*	Teacher asks only non-science questions or provides no wait time or questions lead learners to misunderstandings or no informal assessments through questioning are evident.	Asks yes/no, recalling of fact questions.	1-2 efforts to ask students to explain their thinking using reasoning and appropriate evidence	3 or more efforts to ask students to explain their thinking using reasoning and appropriate evidence.	• Predictions, conjectures, ~~explains~~ rationale • Wait time • Evaluating strategies/ideas • Error analysis; counter ~~examples~~, comparisons • Follow-up questions, ~~feedback~~ • Pair-share, dyad, group • Panel, presentations, • Whole-class discussion, seminar • Re-voicing, summarizing, Modeling • Consensus, proof
Teacher discourse: *Linking Ideas*	No linking in class discourse.	Teacher revoices or acknowledges student response.	Teacher revoices, acknowledges or questions student response to further the discussion 1-2 times.	Teacher revoices, acknowledges or questions student response to further the discussion 3 or more times.	
Students discourse: *Linking Ideas*	No student linking in discourse	Students link their answers or ideas to others but do not use the connection to compare strategies, generate ideas or build upon knowledge.	Students link their answers or ideas to others 1-2 times in ways that compare strategies, generate ideas or build upon knowledge.	Students link their answers or ideas to others 3 or more times in ways that compare strategies, generate ideas or build upon knowledge.	
Student discourse: *Mathematical Rigor*	Non-math student talk OR Math ideas not generated by students (i.e. repeating what Teacher said or only asking questions.)	Student talk that only conveys procedural knowledge (i.e. definitions, procedures, rules and/or correctness of answer or providing an answer.)	Student talk that conveys procedural knowledge in relation to conceptual understanding or mathematical reasoning.	Student talk that conveys procedural knowledge in relation to conceptual understanding and mathematical reasoning.	
Student Participation in Discourse	Zero, one or two students participate in the math discussion.	More than one or two but less than ½ of students in class participate in discussion around the math topic.	About 1/2 of students in class participate in discussion around the math topic.	Majority of students in class participate in discussion around the math topic.	
Participation Structures	No participation learning structures for student participation and/or discourse.	Participation learning structures with limited structure for equitable student participation -Some seating arrangements allow for discourse in pairs/small groups.	Participation learning structures with some structure for equitable student participation. -Seating arrangements are in pairs/small groups -Some consideration for student needs.	Participation learning structures with structure for equitable student participation -Pair sharing -Small groups have individual roles and responsibilities. -Consideration for student needs.	

Teaching Dimensions	Contemplating Level 1	Emerging/Applying Level 2	Integrating Level 3	Innovating Level 4	Examples of instructional strategies
Equitable Access to Content					
Supporting Development of Academic Language	Little to no support of *learners'* language needs in instructional task. OR Content is oversimplified, limiting access to content.	Teacher applies scaffolding and language development strategies to support the conceptual understanding of the learning task(s).	Level 2 plus Teacher provides explicit models and opportunities to practice, and feedback for *learners* to develop further language proficiency.	Level 3 plus Teacher differentiates language strategies to further develop language proficiency.	• Accessing prior knowledge • Multi-tiered, multicultural, application tasks • Academic language strategies: word bank, association, sentence frames, etc. • Use of multiple learning modalities – productive & receptive, visual, kinesthetic, auditory, etc. • SDAIE/sheltered strategies: group projects, choral reading, concept mapping, graphic organizers, production, quick write, quick draw, reflection, sentence starters/frames, verbalizing, vocabulary cards, etc. • Technology • Differentiated instruction through teacher input and student output.
SDAIE to Support ELLs	Little to no evidence of SDAIE strategies used to support ELLs.	Some SDAIE strategies are evident. S talk in small grps whole class, T modeling	Several SDAIE strategies are evident.	Several SDAIE strategies are used during instruction and 3 + SDAIE strategies are used as a form of formative assessment.	
Making Content Relevant for Learners	Limited to no evidence of connecting content to the real world (can include culturally relevant pedagogy or critical pedagogy).	Connection to the real world (can include culturally relevant pedagogy or critical pedagogy) is vague and not fully integrated into instructional focus.	Connection to the real world (can include culturally relevant pedagogy or critical pedagogy) is clear and integrated into the instructional focus and learning tasks.	Connection to the real world (can include culturally relevant pedagogy or critical pedagogy) and student lives is fully integrated into the learning tasks and instructional focus.	
Differentiation	Little to no evidence of the use of diverse learning modalities to address student achievement needs.	Some evidence of the use of diverse learning modalities to address student achievement needs.	Evidence of diverse learning modalities that effectively address student learning.	Effective use of diverse learning modalities that effectively address most or all students' achievement needs.	
Classroom Ecology					
Classroom Norms	Few to no observable classroom routines (class running, lesson running, interaction) exist causing student actions to interfere with learning.	Some observable classroom routines exist (class running, lesson running, and interaction) that may or may not facilitate a positive learning environment.	Observable classroom routines exist (class running, lesson running, and interaction) that facilitate a positive learning environment and may or may not promote critical thinking.	Observable routines (classroom running, lesson running, and interaction routines) exist that facilitate a democratic and positive learning environment and promote critical thinking.	• Instructional time is used wisely • Structure, transitions from activity to activity are planned • Classroom routines: a) class-running routines, b) lesson-running routines, c) interaction routines planned • Safety concerns are addressed appropriately • Teacher is professional in speech, dress, interactions with students, responsibilities to the profession
Democratic Classroom	Teacher demonstrates little to no respect of student input.	A few voices are respected but teachers' response to student input does not often enhance learning and does not often promote healthy student-student-teacher relationship.	Some voices are respected but teachers' response to student input enhances learning and can promote healthy student-student-teacher relationship.	Most to all voices are respected. Negotiations and student input enhances learning and promotes healthy student-student-teacher relationship without undermining teacher knowledge and responsibility.	
Professionalism	Little to no evidence of professionalism pertaining to the following: Planning, dress, academic language/ professional talk, organization, timeliness.	Missing 2 or more: Planning, dress, academic language/professional talk, organization, timeliness.	Missing 1: Planning, dress, academic language/professional talk, organization, timeliness.	Planning, dress, academic language/professional talk, organization, and timeliness all evident.	

What did we learn from the data we got from using the secondary observation rubric

- Content matters:
  - some content lends itself to greater connections to culturally relevant pedagogy and rigor?
  - Task is important (lab vs. non-labs)
- Context:
  - Block scheduling– teachers with 4X4 must cover all the content in one quarter allowing less time for instruction.
  - Capturing discourse in small groups
  - Not capturing student talk
  - PBL
- Story within science (trends in science)
- Story within math (trends within math) - Holly

Conclusions

- Tool that can be adapted **as a part** of a teacher evaluative process.
- Tailored to classroom observations – what observers can see?
- Favors higher level tasks in described content areas.
- Teacher progress during the apprentice year is linked to other factors, such as mentor quality
- Positive comments from the use of the tool.
- Offers a view of teaching as a learning process

Next Steps

Have mentors use the tool

Further refine the dimensions

Make it more user friendly for broader application?

Helps mentors articulate apprentice goals and progress