



Project for BATDC Fellows Group 2003-2004

by Jennifer Stuart — Out of Site

This was my third year being a fellow. I have been working with various ideas from Harvard's Project Zero from the time I was in graduate school (1989!). What has surprised me about this work is that it never fails to be interesting. I continue to have bits of my teaching illuminated that I was never cognizant of. Working with the different frameworks that PZ provides, along with reading about different investigations into all aspects of learning, has made me a more invigorated, informed, and better teacher. When starting this work, I took one step at a time. It can feel overwhelming, but once you realize that it is a never-ending process, that it is exciting to always reach towards improving your understanding of what you do and the methods that you use, you realize that each step (no matter how small) is important. This is because the frameworks allow you to be deliberate and reflective with your work. Reflection takes time, especially in a situation that is as complex as the classroom, in a world as complex as ours. That is why the frameworks provide an anchor, a home base that one can continually return to. They ask questions like, "What is it that I want students to understand?", "Why is this important?", "How will they understand?", "How will I check how well they are doing during the process of learning?".

The newest additions to my work are the DIMensions, Studio Habits Framework, and looking at classroom culture (how to create a culture that supports intellectual curiosity). I also learned how to use the CCDT (the online curriculum tool that enables you to share ideas with educators around the world). Finally, I played with the idea of rubrics in art education.

The steps that I took this year are:

*Working more on my understanding of these frameworks and concepts by reading, discussing ideas with colleagues, and trying to see how these ideas fit in with my overarching philosophy of education and art education.

*Using the frameworks and ideas as a lens to look at my current curriculum and classroom situation. Where are things happening well and naturally? What gaps are there?

*Trying out a few small things in the classroom.

- posting a few thinking routines in my classroom
- changing some forms that I had my students working with to better reflect the forms that are important in the field of art
- using the Studio Habits Framework to observe other teachers in their classrooms and to give them feedback on their teaching and using the Studio Habits Framework to reflect on my own teaching
- using rubrics in the art classroom and in an arts education course at the college level

This is an example of an integrated unit designed on line. It is still in process.

ccdt

collaborative curriculum design tool

What if school didn't look like this?

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grade: High School

subject: Art

description: Integrated math and art unit

THROUGH LINES

1. t#2: How can math help me to create my world?
2. t#3: What do art and math have to do with one another?
3. t#1: How can math help me to understand the world around me?
4. t#4: How can design support and enhance community building amongst diverse people?

GENERATIVE TOPICS

1. Rethinking the classroom setting.: Using art and architecture the students will explore the form and function of their own classrooms (including the furniture) and create proposals for new improved classrooms as a result of their explorations. Examples will allow them to compare and contrast their own classrooms with other classrooms from around the world and from different time periods. This is worth learning about because it helps students to understand the effect that their environment has on them as human beings and as learners. It also gives them a concrete application for math skills. It also teaches them that their own reality is not the only reality out there. It empowers them to make change, and ask for change, and know that they can make their own world.

UNIT LEVEL UNDERSTANDING GOALS

1. ug #2: How have furniture designers and architects used math to design built environments?
2. ug#3: What does the built environment have to do with me and my cultural being? How do I effect it and how does it effect me?
3. ug#1: What are scale and proportion and how do I use them to understand my world?
4. ug#4: How can I use geometric shapes to build a classroom environment that serves the physical, emotional, and educational needs of my whole learning community (including teachers, parents, students, administrators, etc.)?

PERFORMANCES OF UNDERSTANDING

1. investigating human proportions: Students will investigate human proportions by -measuring each others' bodies and making comparisons and generalizations about the relationship between the sizes of things (nothing naughty or anything:) PU a-students will recreate a human body in scale using pipe cleaners. PU b -students will measure the proportions of the furniture in the classroom. They will compare and contrast the scale of the human body to the scale of the furniture by creating an informal visual diagram. Students will investigate how furniture has been designed to accommodate different human bodies (different sizes, different shapes, different physical challenges). PUc-students will choose an image of a piece of furniture from a pile of images and they will create two visual diagrams that shows who this chair would best serve and for what purpose, and who the chair would worst serve and the purpose it would worst serve. VAPA STANDARD 1.1

2. chair design: Students will begin to apply their knowledge about proportion and scale to the design of chairs. They will also understand more deeply the form of various geometric shapes - how to construct them, how they fit together, what their characteristics are. PU a -students will pose and draw each other from three angles in positions that they would find comfortable to sit in and learn in during class (also in using scale and proportion). PU b -students will create 3D figural clay sculptures using a 1/2 " scale (1/2"=1 foot) in the position of the pose that they drew. Students will be introduced to various geometric shapes and will experiment with thick card paper and tape, figuring out how one might draw them or construct them. These will be very loose, experimental, and will rely on the students making discoveries and sharing information. The class as a whole will come up with a variety of ways to draw and construct geometric shapes. PU c - students will create three chairs (from thick card paper and tape) that are to scale with the human figure that they previously created. Of these three chairs, two will be created only using one geometric shape repeated over and over again. PU d - After a group critique, students will be able to create a chair that uses as many different geometric shapes as they want, although it must be to scale and it must support the pose of the clay figure. VAPA STANDARDS 2.4, 1.1, 4.3, 4.4 MATH STANDARD (GEOMETRY) 8.0, 9.0, 11.0, 16.0

3. redesign of classroom environment: Students will use all of the knowledge that they have previously learned in this unit to create a model of a redesigned classroom environment using 1/4 " or 1/2" scale. This final performance of understanding will ask them to figure out how to approach this task, and will enable them to use what they know about measuring, human proportion, scale, and geometric shapes in a new way. Culminating PU-redesign of classroom environment. Working together in groups of two, using thick card paper, tape, and clay, students must create 1/4" or 1/2" scale models of their idea of a more functional and inspirational classroom. Their clients will be their class, their teacher, and their parents and guardians. The design elements that they will be playing with are form and scale - furniture and the shape of the room. They will use their knowledge of the history of classroom design and design. Their design must incorporate at least 4 geometric shapes (they can include organic shapes as well). Their design will be judged on the elements of design, their understanding of how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids, the function of the design, the expression of their ideas, their understanding of the history of classroom design, their craftsmanship, the way that the classroom addresses the needs of the learners and the teachers, and their presentation of their ideas. They will not be playing with light or color or windows, or entrances or exits. They will work together to create a plan of action (how will they solve this problem, what are the steps?), to go through the steps of creating the project, and to present their idea to the class. VAPA STANDARDS 1.1, 4.3, 4.4, 2.1 4.4, 5.4, 3.1, 3.2, 3.3 MATH STANDARDS (GEOMETRY) 8.0, 9.0, 11.0, 16.0

4. investigation of classroom design.: Students will do a series of investigations on classroom design to see how others have solved these problems historically and in present day time. They will visit a series of classrooms from preschool to college level. They will visit a facility that is built specifically for people with diverse physical needs. Before going to visit the class will collaborate in the design of an interview tool and method. During these visits they will document (measure, draw, write about, ask questions) about their experience. They will specifically look for geometric shapes in these classrooms and how they affect the space and feeling of the classroom. They will talk to architects, furniture designers, teachers, parents, administrators and students and use their interview tool to gather information. They will share their findings and compile them into a scrap book for future use in the classroom. PU a- the students will create an architectural set of drawings that tell us about a classroom from a different time and/or culture. They will choose a culture and a time period to investigate. They will do a presentation of the set of drawings (including elevations, floor plans, and details) and in the presentation they will make connections between the design, the needs of the students, and the culture that they come from. VAPA STANDARDS 3.1, 3.2, 3.3

ONGOING ASSESSMENT

1. investigating human proportions - OA: -informal discussion and observation of students measuring their bodies -group critique of pipe cleaner figures to identify the most successful in terms of proportion -informal

diagram with critique that includes a discussion of what diagrams best communicate information and why - two diagrams

2. redesign of classroom environment OA: -students and teacher create a rubric for the final project -ongoing in process critique individually -students in group self-critique using rubric-formal presentation of idea to class, feedback sheets using the rubric as a guideline filled out by audience (audience will include parents, teachers, students, and administrators).

3. chair design OA: -ongoing individual feedback regarding figure drawings -peer critiques of figure drawings -group critique of 1/2" scale clay figures -informal discussion and sharing of information about geometric shapes - students hypothesize about which shape would best serve what physical needs -group critique of the first two geometric chairs-students write down comments for 2 chairs where they think the use of shape and form is working well and why, two comments on 2 chairs that they feel would really suit a certain kind of physical, emotional, or educational need, and 2 comments for two chairs that are visually the most powerful and why -self-critique of final to scale chair using rubric provided by teacher

4. investigation of classroom design OA: Students will receive a rubric that outlines the criteria for their architectural drawings and their presentations. -ongoing informal discussion with teacher -student self-critique using rubric in process -peer feedback will be given on their presentations using the rubric.

Based on the graphic organizer presented in the Teaching for Understanding Guide by Blythe & Associates.

This paper is a result of research conducted by the author. Any use of this material in any theme, essay, term paper, research paper, thesis, or dissertation should be credited to the author. This research was conducted with the support of the Bay Area Teacher Development Collaborative.