

# Forming the Forms of Higher Intelligence: Further than Standards

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Many minority children are being taught by their teachers in ways that focus on promoting good results on standardized tests. I teach in a southwestern school that serves American Indian and Hispanic youth and can attest that since the advent of the No Child Left Behind (NCLB) Act, the stakes have become high for the schools to achieve respectable outcomes on these exams. If schools don't make AYP (Annual Yearly Progress), everyone's job is threatened and the schools can eventually be taken over by the state, which can fire the staff. While it may be important for students to perform well on tests, doing well on tests doesn't necessarily originate from good education.

For the last few years, the trend has been to teach to the test and only teach those items that will be tested. For example, as a result of poor math scores, math standards that are being tested are those emphasized, and teachers are explicitly directed by their school administrators and coaches to concentrate only on those items, resulting in a narrowed curriculum. Teachers often make statements such as "I won't waste time teaching (this or that) because it won't be on the test," unaware that they are depriving children of a rich and varied curriculum.

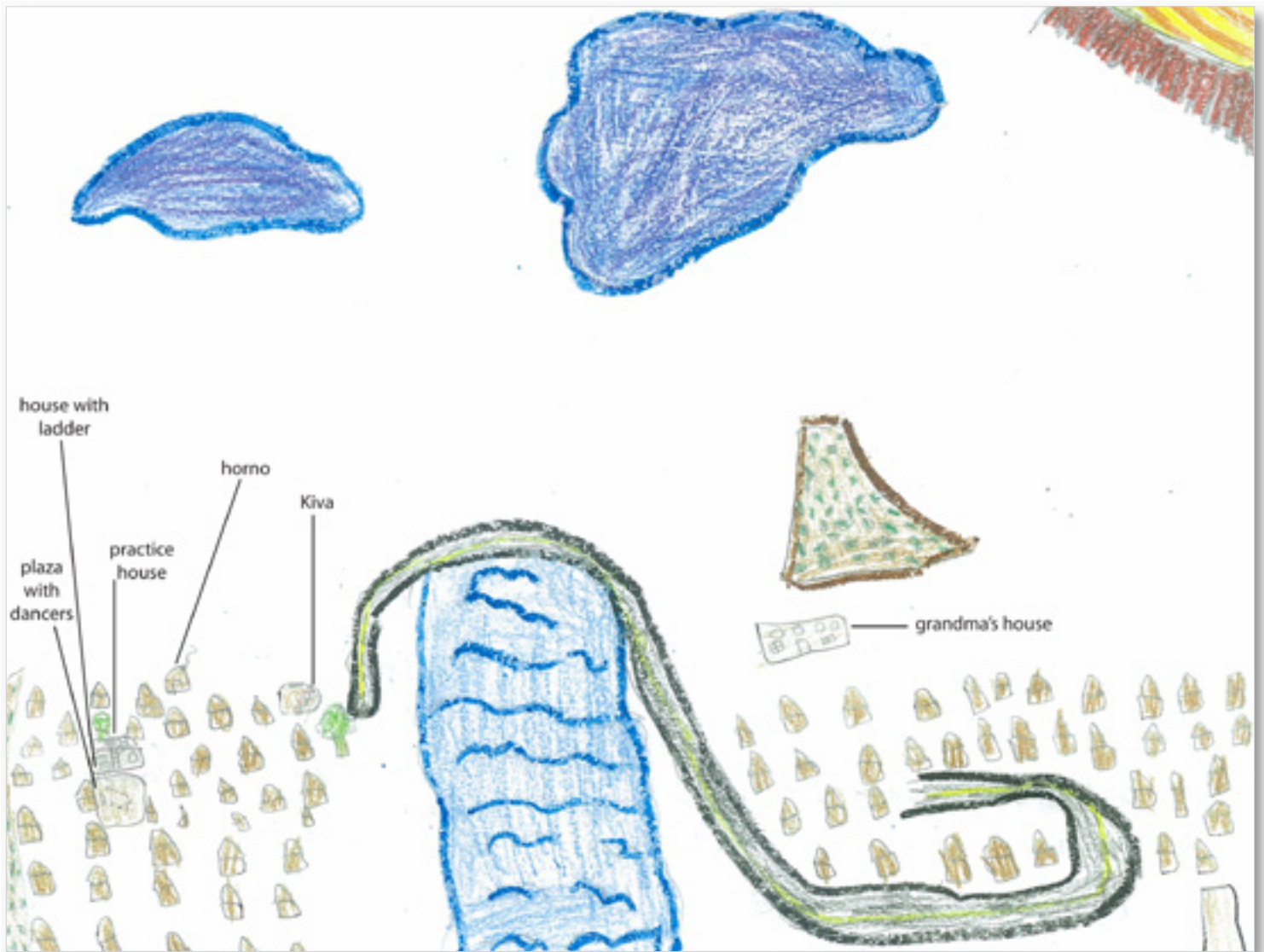
Social studies have gotten the least attention by teachers of minority groups because

it is not yet tested. Teachers complain that there is no time for such "extras." In opposition to this curriculum narrowing, I constantly strive to impart a thinking curricula for the children. In this paper, I outline a project that I did with my first graders that I call "Land and water forms," which is basically a study of maps. Although the children learned a great deal about social studies, it was not my main point to emphasize particulars; rather the goal was to have the students develop the structures that promote higher order thinking, which is advanced through observing similarities and differences, generalizing from specifics, making plans

and problem solving, and using rational thinking. In all, I will show that relating the students' cultures to "school" subject matter provides repeated opportunities to increase the children's mental development.

We started our theme by learning the cardinal directions. The directions are pervasive in Pueblo Indian culture and ceremonials in New Mexico and Arizona, where each point is associated with particular colors and animals (Dozier, 1970). Signs were posted in the classroom, labeling North, East, South and West. We discussed them as locations. The children started to use the points in conversation with others: "I am in the south of the room;" "Maria, go to the west of the room to get your book." We drew and discussed the compass rose and looked at many of them on various maps. We made a class map of the room: The children drew and cut out tables, chairs, shelves, dry erase boards, teacher desk, computers, and other items in the room. They drew little paper books, pencils, and other accoutrements of the classroom. They placed and then pasted the items to the class map, using as their guide, the cardinal directions labeled in the room. When the map was finished, they wanted to represent themselves in the diagram. One of the children grabbed some playdough and made "himself" and

Figure A. one child's map of the Pueblo Indian village, where she lives



placed his replica by the paper listening center bench, one of his favorite places in the room. Next, many others clamored for a piece of clay, making themselves and friends and soon what had been a two dimensional map became three dimensional as they recreated the children in the class and placed them in various locations, noting the particular direction.

My students were learning that maps used *symbols*. This is no small matter, for the ability to symbolize is a vital aspect of literacy making. In the beginning, when we looked at a globe, when told it was representative of the world, they thought it was the world. One child asked how we could fit on it and another asked if we were small *like ants*. Thus, in the beginning, maps are more likely to be understood than the globe as symbols when brought down to a concrete level; the child being able to actually

work the concept through vehicles such as discussion, and using the arts, etc. in this instance, through things they know, such as what constitutes elements in a classroom. Of course this is true for any learning and the teacher should keep this in mind, knowing abstract ideas can be made understandable to young children but they must have opportunities to manipulate the concept. Understanding the symbol of the map is gradual but understandable as the children manipulated real factors but the globe was a challenge because students did not yet have a concept of the world as a sphere that we are all standing on. As the children became more cognizant of symbolic geography, they became better able to grasp the conception of the globe, and, by the end of our study, understood it as the representation that it is.

After we made our class map, the children became very interested in making

symbols of their own personal world. Next, I asked the children to make maps of their communities. Figure A above represents one child's map of the Pueblo Indian village, where she lives. In the village, the children are used to freely roaming about, for it is an area that is separate and strangers are quickly noticed and reported to others. This map making of their environment afforded the students the opportunity of making sense of specific locations in relation to the whole, seeing a particular place as a part of the entire environment. For example, they may have walked to a friend's house but they probably didn't consciously perceive a specific place as part of the whole. In this way, the children's thinking is challenged so that they may increase their perception of things.

I was not as concerned for the accuracy of the map as I was for the children to abstract their thinking and develop their

use of using rational thought through planning, a key aspect of intellectual growth. In Figure A, the child has drawn the quintessential proceedings of her culture, so that the assignment broadened to be a map of her social and ethnic life as well as a map of her physical surroundings. In this process, she became accustomed to using logical thoughts in order to plan. Through this activity the children learned to "think big" about their environment by putting small features into the whole. This map has the requisite (for this area) sun, clouds and mountain. Her description begins moving her hand across the depiction: "These are all the houses" as indeed, the many houses in the village are concentrated like that. Central in the child's map is the Rio Grande River and "that's the road across the river" drawn in exquisite detail complete with a yellow line, solid in some of the areas and broken at others.

Drawings become not mere renditions of the child's impressions but actual tableaux for thinking. She had to go back in time (memory) and visualize the road in all its detail. Next, when the child used the river as a dividing point for two sides of the town, telling me that "My grandma lives on that side [East] and we live on the other side [West], which is the "village" proper, she was looking at the setting from a bird's eye view and was then able to understand the town in its entirety.

All of the essential elements of Pueblo Indian life are concentrated on the West side, the main geographical site being: "That's the plaza, the place where people dance" we can see a square in the center, where the plaza is located. Dance is a vital and frequent part of Pueblo life and is a religious event, a way of praying (Fayden, 2005). The plaza is the main attraction of the village and is where most communal dances and events take place. It has sunken into a bowl- shape 3 feet below its surroundings as a result of the hundreds of dancers pounding the earth thousands of times over the years. The child has drawn the mere illusion of dancers simply to indicate that the plaza represents the dance. "That's where people watch the dance," pointing to the perimeter of the plaza, where I myself have stood, watching various dances. Often, several hundred men, woman and children dance to the beat of a drum accompanied by a chorus

of male singers. Prior to the annual May 1<sup>st</sup> corn dance, the people rehearse in a house designated for this "That's the place where we practice dancing. It's near the tree." On this important village occasion and on all other's, the women of the village bake bread in special beehive shaped outdoor ovens called "*hornos*." When in use, they have a vent for the smoke to run out, just as the child has drawn it. South of the practice house is a home with a "ladder, door and window" Ladders have been used by the Pueblo for thousands of years, first as part of the history of their emergence to the earth, later, as a way to escape from their enemies (go up and pull the ladder in) and always, simply to get to upper levels. Not mentioned, but drawn in the village, was a kiva, which is the traditional Pueblo religious ceremonial chamber. The omission in her verbal description was no oversight—due to the secrecy of Pueblo spiritual life, the children (as all villagers) are forbidden to publicly speak about anything considered sacred.

Next, I shifted the class' attention to the world political map, which was a large pull down type in front of room. The children oohed and ahed when I presented it to them. We learned that a continent was a large piece of land and I introduced the children to the names of them, first emphasizing where they lived. We also had a rug with a map on it and this map was less complex, only showing and naming the continents. In the absence of a similar rug, the teacher can draw the continents on a large piece of material, perhaps enlisting community members to come to school and create it with the children. Often families of American Indian and Hispanic children feel estranged from the school, where the thrust of relations between the two is the teacher's judging the children's success based on test scores, which families have little knowledge about and which forces them to defer to the teacher's judgment about their child. Inviting families to do "real work" contributes to their feelings of relevance in the school community. Our district and our school have taken many commendable steps to attempt to bridge this gap.

It is important to have both maps, the simple and the regular political one, so that the students can move from the tangible to the more abstract, keeping in mind that all

of the maps are conceptually complex by way of their symbolic nature. At this time, the children were also looking through various children's atlases, during their "quiet" reading time, anything but quiet as they explored these books with friends and discussed what they saw. So they were exposed to a variety of maps while discerning the same world form of the continents on all of the maps. The focus of learning was to increase these young learners ability to perceive, in this case, the *shapes* of the continents, paying attention to the ridges, crests, rims and edges of each piece, so that they could ultimately discern its true nature. Every child was given a die cut shape of each continent. Thus, the children were able to study the configurations and make their own world map, arranging the die cuts on their individual project. Additionally, the students constructed other personal world maps, maps of the hemispheres, by placing puzzle pieces from a world map puzzle on their own paper, tracing them one by one while placing each shape in what they conceived as the proper position. The hemispheres were delineated by the children, using a clear plastic circle. This required intense observation. The teacher can always make a puzzle map by drawing the continents onto a cardboard like material, laminating the whole and then cutting out the specifics for the children to use. These young learners used the various maps as models: the puzzle, the rug, the pull down world map, the various atlas' from our library.

We then moved onto the big political map, which showed boundaries. We had many days of children simply observing what they saw, while they asked numerous questions. Again, they delighted in naming the continents and no matter how many times they did, were always eager to repeat the performance for a classmate, who then also proceeded to name the continents to them. Following that, I introduced various land forms and its corresponding water form. These forms are part of a traditional Montessori course for 3-6 year olds who learn them easily and so I thought, why not expose these student's to these mind expanding concepts? After all, our state Kindergarten performance standard in geography (*New Mexico*, 2007). is merely to define *over, under, near, far, up, down, front, back*, a typical watered down cur-

Figure B. Child making an island, the brown representative of land; the blue, water.



riculum as most pre-schoolers already have this information.

We made a little book with the land-forms and their descriptions. Using this book as their model, they would make that same form out of play dough, thus making tangible a very complex topic (see Figure B).

The students would go to the large class map and find various versions of the same form, so that if they were working on a cape or an isthmus, for example, they would see how many of those same forms they could find on the map. Day after day, little exuberant voices declaring that they had found a particular structure filled the room and warmed my heart. What teacher wouldn't be thrilled when her young students searched a large map exclaiming "There's a bay!" "Look, I see a strait!?" We did this with all our forms. Of course they attempted to sound out and read many of these points of interest. This made phonics an integral part of learning. There were no progressively confining rules such as *you cannot go to the next sound until you master this one*. When reading is regarded as a set of sub-skills that should be mastered individually, children become recipients

of a low level of instruction. In this unit, motivation proved to be the inspiration for reading. There were no "at risk" groups that had to be protected from reading or working beyond their level.

As with all themes, I always conclude with a performance exhibition for the families. Whereas in the learning events, process is more important than product, the inverse is true for presentations. Families love to see their children "showing off" their knowledge. We created a slide show with a projected power point presentation. The children sat in a semi-circle on the stage, cheerfully reciting their lines, telling the audience about the cardinal directions and continents and land and water forms while periodically their rendition of a form or a drawing or pointing to a particular place on the projected world map demonstrated to the families that they were indeed, very smart children. This is what school should be about. Children learning through an advanced and explorative curriculum, children learning when teachers' are willing to think of their charges as extraordinarily brilliant and see their job as feeding into that belief.

Einstein said that he wasn't really smarter than other people but that *he paid more attention*. Fleming *noticed* something strange in a Petri dish: a mold later known as penicillin. Neither one of these genius' could have made their mark unless they joined powers of observation with a keen intellect. Shouldn't we base learning on those elements that promote mental prowess? While each child in the class may not grow up to discover something phenomenal as a result of this geographical excursion, it is more likely that children who had full use of their minds in early childhood will have a sharper intellect than those whose minds grew dull through skill and drill and pre-set standards. The challenge for all is to go beyond the standards. Let's give all children the tools for maximum growth! ★

## References

- Dozier, E.P. (1983). *The Pueblo Indians of North America*. Long Grove, IL: Waveland
- Fayden, T. 2005. *How children learn: Getting beyond the deficit myth*. Boulder, CO: Paradigm.
- New Mexico content standards, benchmarks and performance standards reference guide*. (2007). New Mexico: New Mexico Public Education Department