

Big Idea

This complex instruction rotation was designed to teach the children about the mechanics of nonstandard measurement, a requirement of the South Burlington School District's kindergarten and first grade curricula. The big idea was that many different things about an object could be measured (e.g. height, width, weight, volume, etc). Two of the four activities were designed to give the children practice with the concept of linear measurement. The other two gave them practice with measuring volume and comparing weight. All four activities were hands-on tasks that allowed the groups to talk and work as a team.

Multiple Abilities

Multiple abilities were tapped by the tasks in this rotation. Some of the abilities needed for all of the tasks included reading, writing, discussing, comparing, counting accurately, making decisions, and noticing details. The tower building task also required the ability to design a stable block tower. The students were originally introduced to four of the "useful skills" (reading, writing, counting accurately, and discussing) during the beginning orientation. At the end of the first two rotations the students themselves added to the list with examples such as listening to good ideas and cooperating. Although these abilities are not quite as academic as normal CI multiple abilities, they are within the zone of development for children who are still learning how to be functional members of society.

Such a good job doing this.
Wow!
double wow!!

Pre/Post Assessment Scores

Only the four students identified in the Classroom Structures Project were given the pre and post assessments, due to time constraints. They were asked the same two questions before and after the rotation. First, what is measurement? Second, what kinds of things can you measure about this box? The first question was scored based on the number of words they used to describe measurement (0-5 words = 1, 6-15 = 2, 16-25 = 3, 26+ = 4). For the

second question they were given a score based on the number of ways (height, width, volume, weight, etc) that they thought of to measure the example (0-1 = 1, 2 = 2, 3 = 3, 4 = 4). The students were given a plus (equal to one point) if they were able to give multiple examples of a type of measurement (e.g. 3+ = 4 if they said height, volume, width at the top, width at the bottom, width in the middle, etc), making a five-point scale. The scores are as follows:

This is so well figured out by you!

Student	Pre-scores (Q ₁ + Q ₂)	Post-scores (Q ₁ + Q ₂)	Gain
Girl 1	3 + 2 = 5	4 + 4 = 8	3
Girl 2	4 + 3 = 7	3 + 4 = 7	0
Boy 4	2 + 2 = 4	3 + 3 = 6	2
Girl 7	2 + 1 = 3	2 + 4 = 6	3

Average Gain = 2

These scores may not be entirely accurate, since the post-assessment was administered with haste during the last five minutes of the last day before April vacation. This was just after the completion of the CI rotations, but it was definitely not the ideal time to be giving a post-assessment because the students were not as focused as they were during the pre-assessment.

Still you would only have a more conservative meaning that's okay

Identified Students' Learning Behavior

Girl 1: Girl 1 is the most popular student in the class, according to the Classroom Structures Project. She is also noticeably the most confident member of the class. Therefore, it was not surprising to see how well she worked in her group. During the first rotation one of her group members (Boy 6) had a hard time working with the group and ended up leaving in tears. At that point I took the opportunity to assign competence to the two remaining group members for being able to talk and work together, making sure that the absent group member could "overhear". During the next rotation, Girl 1 was very skillful in being able to keep Boy 6 in the group, eliciting his cooperation and redirecting his negativity. It was also interesting to see how Girl 1 was able to resist becoming the *de facto* leader of the group, especially under the pressure of Boy 6's problems. Despite the fact that she is academically and socially more developed than both of her

bec. he only wants his way

group members, she did not take over the group and instead seemed to work with her peers to the best of her ability. Especially given the fact that she was held in such high regard by the class before the rotation, I was not able to notice any change in her learning behavior afterwards.

Girl 2: Girl 2 was a student who I was not able to watch as closely as I would have liked to. I did notice that she took her role as recorder very seriously (almost too seriously sometimes). The first thing she would do when the group started was to take out the recording sheet and fill in what she could. I saw that she sometimes neglected her other responsibilities in the group to record information. I did assign her competence for recording useful information, but I wonder if that is one of the things that made her so eager to record instead of help with the task. Girl 2 was the second most popular student in the class, and I failed to notice any change in her outgoing learning behavior after the rotation was completed.

Boy 4: Boy 4 is one of the quiet students in the classroom. In his group, however, he was very involved. He was one of the two group members who stayed on task, while the other two were often off task. He had many of the skills needed to complete the tasks (e.g. writing, reading, counting accurately, etc) and he seemed to use them to help his group. When the Materials Manager for his group asked me to read an activity card for them, I sent her back to see if anyone in the group could. Boy 4 was the only one who was able to, and after he did I assigned him competence for it. As the group's Reporter, Boy 4 was still quiet and had to be reminded to use his "big voice" when addressing the class several times. It is hard to say if Boy 4's learning behavior changed as a result of the rotation. He is still quiet, but he might be participating more often. Without some more time to study the situation, however, it is difficult to tell.

Girl 7: Girl 7 does not have a problem with being too quiet in a group. On the contrary, her difficulty is with being too bossy. Unfortunately, she missed the first of the three rotations the class performed, and this might have affected her learning behavior. It was interesting to note that Girl 7's bossiness led her to shut down and not participate during the last rotation. She felt that her fellow

← all you really care about here is did it chg. during the activity

group members were not listening to her and did not want to do it "her way", so she just did not do anything. She was not able to, and no one in her group tried to help her, work through the differences of opinion. The two first graders in the group ended up doing most of the work and Girl 7, as the Materials Manager and the only person who could ask me questions, spent most of her time complaining to me or playing with the materials. Given the problems she had with the group work, it is not surprising that I have observed Girl 7 engaged in the same "well-intentioned" controlling behavior after the rotation that she exhibited before.

Personal Reflections

The first thing that I learned about this type of group work is that it can be done with young children. If the activity cards are kept simple and the multiple ability treatment is kept short and sweet, the children can handle them. Especially in a district like South Burlington, which does a good job of teaching the students how to work together already, even young children can succeed in cooperative small group activities. They were even able to understand the concept of roles, although some took the idea a little too literally. Several of the students, like Girl 2, took the assignment of roles to mean that they did not have to participate in the group work because they were the Reporters or the Recorders and their jobs did not come until the end. This led to some students that were totally disengaged from the group task and therefore had no idea about what they were supposed to be learning about. I addressed this during one of the orientations, which helped, but the problem did not totally go away.

As a whole the class did a nice job of working cooperatively in their groups, but it was interesting to see the variability in the group work skills that individual children brought to the table. Some, like Girl 1 and Boy 4, were skilled at being productive members of their groups. They participated in the give and take that is essential for a group to function. Others, like Girl 7, were intent on getting their own way and when they felt that they were not they shut down or blew up. Still others, like Girl 2, just did their own thing, forgetting about the group goal. I think that additional opportunities for these children to work on group tasks that *require* collaboration and cooperation would be very helpful.

and rich!

easy, Eli - this is a first time

I also learned that the timing of this group work could be very important. I tried to squeeze the rotations into a tight time frame at the end of my solo weeks, thereby allowing myself little room for error. I noticed a definite downward trend in the productivity of the groups. The first day was good, the morning of the second day was okay, and the afternoon of the second day was not very good. In fact, Girl 7's shut down came during the third rotation. I think that I tried to put too much into those two days. In the future I would spread these activities out over a longer period of time so that the students are not overwhelmed with group work. The fact that it was the two days before April vacation did not help, either, nor did the unseasonably warm temperatures. I think what it all comes down to is that we were all a little bit testy by Friday afternoon, which made it hard to work closely with other people. We have no control over the weather, but a change in timing in the future might alleviate some of the difficulties.

As for the purpose of doing CI, which as I see it is to level/out students' classroom statuses to allow all students equal opportunity to learning, I'm not sure how much evidence I saw for it in this one rotation. There was a definite increase in student learning, according to the pre- and post-assessment scores of the identified students, but I am not convinced that this would not have happened with other types of lessons addressing the same topics (as opposed to CI). Also, Boy 4 was the only identified student who might have changed his learning behavior as a result of the rotation. Girl 1, Girl 2, and Girl 7 all seemed to behave more or less the same before and after the rotation. All of this does not mean that I do not think CI has potential. On the contrary, I think that, at least in theory, CI could have a big impact on the dynamics of learning in many classrooms. It is just that after doing one rotation with such young children, striking results cannot be expected. First of all, it would take many more opportunities for group work to really change a classroom's social dynamics. Also, children this young are much more fluid in their social interactions, and I am still not convinced that the results of the Classroom Structures Survey are entirely accurate. Just because a student received no votes does not mean that he/she would not have been the next choice on several students' surveys or that

good decision!
It isn't so much about opportunity as it is about the fact of learning opportunity.

see note on previous page

on a different day he/she would not have been mentioned multiple times. I think that the older students get, the more impact CI can potentially have. Finally, I know that even though I tried to assign competence at least three times per rotation, my skill at doing so is still unrefined and probably not as effective as more experienced teachers. It stands to reason that the more facile a teacher is with assigning competence (the backbone of CI), ^{status treatments} not to mention the other aspects of CI, the more effective CI can be in modifying students' social statuses and learning behaviors.

The bottom line is that CI is hard to do well, but it seems to have great potential. Many things can influence the effectiveness of the tasks, from controllable variables like timing, to uncontrollable variables like weather. It seems to me that the older children are, the more ingrained their social statuses are and the more CI can help. It also stands to reason that more than one CI rotation is required to really affect students' learning behaviors. However, if CI is done well multiple times during a school year, I would be very interested in seeing the results.

<i>Criteria for Carrying Out The Task (rev.3)</i>	<i>Criteria (Shaded Cells Denote Bottom Line Criteria)</i>			<i>Level of Demonstration of "know and able to do"</i>		
three or more activities	unable to carry out three activities	planned, organized and carried out at least three activities	planned, organized and carried out more than three activities	unable to judge	shows you know how to do ci	shows you did the ci work
rich criteria including Status Treatment One: Multiple Abilities Treatment	one or two open ended multiple answers multiple abilities tasks conceptual performance task	three or four open ended multiple answers multiple abilities tasks conceptual performance task	more than four open ended multiple answers multiple also derived w/ kids conceptual performance task	✓	✓	✓
pre/post assessment	carried out pre or post assessment	carried out pre and post assessment	average gain score for class reported	✓	✓	✓
big idea	big idea is unreported	unit coherence provided by a big idea	big idea appears on activity cards	✓	✓	✓
cards (activity, resource, individual report)	cards lack essential elements	number of cards appropriate for grade level	quality of cards appropriate for grade level	✓	✓	✓
focus on previously identified children	the learning of some children previously identified described	the learning of all children previously identified described	the learning of all children previously identified described in paragraph format and is related to previous work	✓	✓	✓
multiple ability status treatment	no mention of multiple abilities	some multiple abilities correctly identified	multiple abilities are identified correctly	✓	✓	✓
assigning competence Status Treatment Two.	no mention of assigning competence	assigning competence explained	assigning competence explained and connected to identified children	✓	✓	✓

Commentary: *Elc: This was exceptional work. The big spin on ci was tough and you showed you knew ci theory well enough to make the appropriate modifications. No small feat. Excellent integration of practice into theory!*

practise! - the way to get to Carnegie Hall!

supends m. A. treatment

wonderfully appropri. assessment