Implementing Complex Instruction

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INTRODUCTION

My student teaching experience took place during the fall of 2001. I was placed at the Chilly Hill School in an urban section of Northern Vermont. In addition to the many goals I had for myself during these fifteen weeks, I also had some very important assignments to complete for the Classroom Management course that paralleled this internship. The basis of these assignments was to assess the status order in my classroom, both academic and social, and to construct a Complex Instruction unit for the students to carry out during my time with them. I can honestly say that I was very interested to find out the status order in my classroom. I was anxious to see if my initial impressions through observing the interactions around me would match the actual data I accumulated. Well, it certainly did. In terms of the Complex Instruction rotation, I was a little more nervous. At this point I knew there were a significant number of students in my classroom who had absolutely zero status. I was really worried that these students would either not be able to participate because of the dominance of the higher status group members or that these low status students would not even try to participate because of past attempts that discouraged or shot down.

SCHOOL DEMOGRAPHICS

Chilly Hill School, in an urban setting in Northern Vermont, houses grades K-5. There are 294 total students, 12 classroom teachers, 6 other teachers, and 5 instructional aides. The average class size is 24.5 children. At the Chilly Hill School, 7.1% are eligible for special education services. 35% receive free and reduced lunch. The median income for joint and head of household is $44,662.

CLASSROOM DEMOGRAPHICS

In my third and fourth grade classroom at the Chilly Hill School in Northern Vermont, there are 21 students, 7 are females and 14 are male. There are 13 fourth graders and 8 third graders. There are four African American students, one from Tibet, one from the Congo, and one from China. The students from Tibet and the Congo do not speak English and joined the classroom setting either just before, or during, my solo teaching experience. We have an interesting range of socioeconomic status in our
classroom. Some students are quite wealthy while others are not as fortunate. There are four students who receive free or reduced lunch, of course this is never announced when the daily lunch count is tallied but there are some indicators that give this away. For example, these four children don’t bring in daily or weekly money to put on their lunch accounts and these same four children rarely brought in a snack from home. In addition, a few of these students also rode the bus which is another indicator that these children came from less fortunate homes. Most children in the class are met by parents, babysitters, or are allowed to walk home with a neighbor or older brother or sister. I am not saying that all kids that don’t bring money to school for lunch or those that ride the bus are poor, but these are some of the ways in which socioeconomic status is determined in this particular classroom.

We have two kids that receive Title 1 services. These two boys are each pulled out of the classroom three to four times a week for a half-hour session. They work with a reading recovery teacher. The students themselves love going with this teacher and really look forward to these times. The remaining students are very aware of the fact that these two boys are slower at reading and therefore have to work with a special teacher. Additionally, the reading recovery teacher is the mom of a very popular third grade girl in the class. Most of the students are good friends with this girl, know her mother, and know what her mom’s job is at Edmund’s.

Overall, I would say there is an extremely strong sense of community at this elementary school. When I walked into the building everybody I saw cheerfully greeted me. We were all at the same level and had the same goal: to help all children to grow and learn.

ASSESSING STATUS ORDER

One of my personal academic goals and also an assignment for my corresponding management class during my student teaching experience was to complete a status order survey to basically see what exactly the status looked like in my classroom. Because there is different levels of status, I needed to break my survey down to evaluate both academic and social status.

The questions I used to assess status order were as follows. How many pets do you have? If you could work with anybody in the class on your reading homework, who
would it be? How many siblings do you have? Where is the farthest place you have traveled to? If you were having a very special birthday party, who would you invite? I threw in some other questions so that there would be slightly less focus on selecting individual classmates. Obviously, the question about the reading homework is what I used to tally my classroom academic status. The question pertaining to the birthday party was my social status data.

The academic structure in my classroom is very group oriented. The students sit at tables and even when they are doing individual work, they are usually allowed to consult with others at their table. Therefore, cooperation is one of our major areas of focus no matter what the academic content. Another area we concentrate on is the development of social skills. We devote morning meeting to this area but emphasize the importance of both cooperation and social skill development in all areas of life.

Our math program is Mathland and all of the fourth graders go next door so an entirely fourth grade math class is created. Math is generally structured into partner work. Children get a chance to practice their skills with students in another classroom where perhaps the areas of focus are not quite the same as ours.

Reading is arranged into book club groups. The students discuss the book as a class and then break into their book club groups to discuss again, more specifically. Science is structured similarly to this. We have been creating open-ended tasks that are rich but not necessarily designed for Complex Instruction. We are however giving the students all the opportunities we can to work in groups and to practice with collaborative norms in order to prepare them for the Complex Instruction work we will be doing down the road and to enhance their social skill development and cooperative skill building. Our overall goal is for students to learn from each other and respect each other’s contributions and abilities. We feel that group work helps this goal to be achieved.

One other aspect of Complex Instruction that I practiced with and implemented throughout the semester was the job roles. I assigned job roles for nearly all of the collaborative activities we did. I used the roles: recorder, reporter, materials manager, resource, and harmonizer. I went over all of the roles for the whole class and during each activity each student got a note card with their particular role described for them. I really tried to help my students stick to their roles. So, if three students from the same group
came up and asked me for construction paper, I would ask them to tell me whose job it was to ask me for materials and to send that person up to see me. I wanted these roles to be taken seriously so that when it came time for my complex instruction rotation, each student would be familiar with all of the roles. I was also hoping that each student would stick to their role so that the high status children would not be taking over the entire activity.

One other area of focus was skillbuilding. I had my students practice with a variety of activities that targeted different skills that would help them to be positive and successful group members. A few of the skills that we focused on during these skillbuilding opportunities were listening carefully, paying attention to details, helping group members, asking good questions, and observing each other. I felt that these skillbuilding activities really helped to establish the foundation for the complex instruction unit I had designed. The students were able to practice these skills that are essential for all collaborative groupwork.

RESULTS

I think my data, for the most part, is fairly accurate. However, I did run into a few problems that I did not administer the survey, they may have chosen students that would not be selected on a different day. Since I did ask the children the status survey questions on a variety of days, I can see how this could be a potential problem could provide some potential error in my data. For example, there are quite a few students that form cliques with other students in a random pattern that I can’t seem to understand. So, depending on the day. On the other hand, the children who do not seem to form cliques gave the answers I expected and would give the same response each and every day. I guess I could have asked each child the survey questions a few times, each time substituting similar questions. I’m not sure that would have helped but this would be a way to at least looked for some consistency between the answers.

Another problem I ran into was that there are twins in my class. Two fourth graders are twin brothers and are very much alike. They are both very popular and smart, from my observations and my data. So when I was collecting data, a few students would say “the twins” for their answer to both the best reader and birthday party questions. I had them pick one because that was one of the ground rules I had said before beginning
the survey. Many students chose the same one and he ended up with the highest status while the other twin ended up with very few status votes. He would have had more votes if I had let the students that said “the twins” give two answers to the survey. It seemed like the students that chose the twin with the highest status just picked the first one that came to mind when they really thought that they both deserved a vote. I don’t feel that the lower status twin’s votes are representative of his true status in the classroom. If I were to do this again, I might decide to give each twin a vote when somebody voted for the twins and not require these students to pick only one.

I think it is safe to assume that the students who got academic status votes are the high status students. Even though some of them only got one vote, there were only 8 students out of 21 that got any votes for the best reader question. This tells me that students were not picking their friends for this survey question. When I looked at this data, I realized that all of these 8 kids, except one, are fourth graders and do in fact get the most consistently high grades or scores. It seems to me that the academic success of these students is quite obvious to their classmates. I can’t help but wonder if their age is a factor. Possibly the third graders are assuming that mostly the older kids will be the most successful readers.

As for peer status, a much wider range of students got votes. For this question, the issue of cliques that I mentioned before came into play. For the most part, friends chose friends. Through my observations, some of the students with votes for the birthday party question are not the most popular kids. For example, the students who only got one vote for the peer status question are those whose “clique” or closest friend in the room chose them. One other interesting piece about this data is that not only are most of the high academic status kids fourth graders but most also male. This group of boys is always willing to share or participate, never get in trouble, and are quite simply, quite likeable kids. I realize now that these attributes are not only noticeable to me, but to the entire class as well. See Table I for the complete status order.

There were five kids who did not receive even one vote throughout this survey. This was sad for me to see but I found that I could have guessed which kids were going to be without votes. The children without votes aren’t necessarily unpopular but these
are the ones who are very quiet and barely talk or the ones that always seem to have conflicts with everybody and are always in everybody’s business.
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FOCUS CHILDREN

After reviewing my data again, I was able to identify my focus students. I chose three boys, one with high status and two who received few, if any votes during my status survey. I thought it would be interesting to see how these three interacted in their CI groups.

B8 had many problems during any kind of group activity. He would constantly argue with everybody and every idea that was presented. He had much to offer any group he worked with but his whole demeanor and personality made it hard for him to be accepted in the group. My goal for this child was for him to be recognized as a contributing group member. I hoped that if he felt more valued and part of the group, he may be content with his amount of input and would slowly begin to realize that all his group members have ideas to offer.

B4 is always an extraordinary classmate and friend. I had no doubt that he would also be a great group member. My goal for B4 was that he help his lower status group members to be involved and respected in the group planning process. I wanted him to make them feel valued so that they could learn and grow in each rotation.

B11 had the most problems in this Complex Instruction setting. He was eager to participate but his group was very unwilling to let him help. B11 is in trouble a lot and constantly instigates problems with all of his peers. He also gets very angry when his ideas aren't used. At the beginning of the week, I had to remove him from the group so that he could have some time to himself to get under control. During this time, I made him watch his group and what they did to get their ideas heard and how they reacted when an idea wasn't used. B11's behavior and group participation significantly improved throughout the week.

COMPLEX INSTRUCTION

My CI rotation took place during the thirteenth week of my student teaching experience. My four rotations were from 12:45-1:45 every day. I decided to create my unit based on the science curriculum that I was using during my solo teaching weeks. My content was Space and I decided to experiment with the interconnectedness of the Earth, Moon, and Sun. I thought that this big idea would lend itself to many complex
activities that would require lots of multiple abilities in order to be successfully and
creatively represented.

The academic structure that I helped to establish in the classroom also included
the introduction of some skill-building activities, which allowed the students to continue
practicing the cooperation and social skill development. Before the skill building
activities, I made sure to introduce some cooperative norms.

• Nobody is as good as all of us together.
• Everybody helps.
• You have the duty to assist anybody who asks for help.
• You have the right to ask anybody in your group for help.
• Pay attention to what other group members need.

We spent a lot of time going over them and I often refer to them to get the
students familiar with the language. The students are starting to refer to them themselves.
I feel they are becoming more aware of what it takes to work well collaboratively. These
norms began to be carried over to all academic content areas. I tried to remind the
children of the norms during all subject areas to increase their continuity instead of just
referring to them during the skill building activities. I also practiced by creating
collaborative activities around the current area of study and I implemented the job roles
during these activities so the students would be somewhat familiar with the various roles
and responsibilities that we would be using during the actual rotations. The time I spent
was worth it. When it came time to actually do the rotation, most of my students were
ready, prepared with the necessary skills, and eager to begin.

MULTIPLE ABILITIES

I quickly realized that indeed the activities I created contained many abilities,
which means they are considered rich tasks. I started the list with the first four: making a
list, giving ideas to the group, brainstorming ideas, and communicating with the group.
Each day, during the wrap-up and occasionally during the orientation, the students added
the rest of the abilities on this list. As you can see from the list below, the students loved
identifying abilities. It was funny, I noticed that they typically identified abilities that
they were personally strong in. We got into some great discussions each day. The
students were not only naming the abilities but they were giving reasons or examples stating how these abilities were used during their group task.

- Cooperation
- Agree to disagree
- Recognizing and using talents
- Working together
- Encouragement
- Building a model
- Making a sketch/design
- Respecting one another
- Making things realistic
- High level thinking
- Using materials

ASSIGNING COMPETENCE

Assigning competence was a concept that I felt somewhat uncomfortable with when it was first introduced in class. It involved recognizing a student, especially a low-status student, performing an ability during the rotation. I took notes when I observed the rotations so I could point out the abilities at the end of the rotation so that the entire class would hear this encouragement and would ideally begin to value and make use of each ability. I really became pretty comfortable with assigning competence. I was able to assign competence to all of the low status kids throughout the week as well as quite a few of the high status kids. These kids just glowed and it was amazing for me to see. I noticed that the students I assigned competence to in the orientation stage really worked hard that day. It seemed to be a much more powerful tool when I did it prior to the task instead of when a task was completed. This was interesting for me to see and helped me to decide to include the assigning competence piece in both the orientation and the wrap up. I think the more the kids heard this public encouragement, the more it stuck. I feel much surer of myself in this area than I did before. It really helped those identified students to work hard and effectively.
WHAT HAPPENED

I learned that adaptations may be necessary to implement as you go. For example, I adapted my CI rotation so that on day three the groups had to sketch a plan or a design so that they were spending more time on the process than on having a creative outcome. They had to submit a clear plan and the reasons for this plan to me before they got their materials. This helped the content to shine through and the projects became more scientific. The report outs were more knowledgeable. I also learned that although I felt I had designed the groups in a balanced way, there were still some strong personalities that tended to clash and hinder the group progress. They were not used to these hands on tasks, in the future I would think about creating two more tasks and having smaller groups. My prediction would be that management would be less of a problem because I would be able to spread out the low status kids, with the management issues, more effectively. The down side of this idea is that I feel strongly about the fact that you will always have people in life that are harder to work with than others. I feel that all the children in my class learned some valuable lessons whether their group worked smoothly or not.

Their insight about the problems that occurred, especially during the early stages of our rotation, astounded me. They provided myself and their classmates with some really great problem-solving techniques to help make the consecutive day a little more enjoyable.

From day to day, my management issues decreased and things ran more smoothly. The students got into a routine and were very excited to complete the next rotations that they had seen during the presentations at the end of each day.

One of the things that made this rotation go so smoothly for me was the wonderful help and support from my mentor teacher. We debriefed each day and it was so nice for somebody to be giving me feedback and encouragement. She had a very invested interest in this project because she and some other third and fourth grade teachers were taking a Complex Instruction class with Charlie Rathbone while my unit was being developed. Since she had never done a CI rotation, she was essentially learning from me and along with me. It was also really nice to have two sets of eyes to
observe the many multiple abilities so that when it came time to assign competence, she and I could both identify some of the wonderful things we saw happening.

FOCUS CHILDREN

During the classroom structures assignment, I talked about a high status boy and two low status boys. The high status boy, B4, during this CI rotation, became the ultimate leader. He was in the role of the facilitator and I put him in this role intentionally. He is a very kind and caring kid and I knew that he would do his best to include everybody and to stay on task. This group was the most focused and hard working. This student was incredible in this role. He was sensitive to all the group members and their ideas and did an amazing job of drawing all the students in. He had this incredibly sensitive way of rejecting and including ideas and seemed to do both in this amazingly smooth nature that would make most adults jealous. Because of his high status, I would assume this role would be easier for him. He had less opposition than one would expect a low status student to encounter. However, there were a few times when I observed one of his group members giving him a hard time. Each time, he found a way to compromise or reach an agreement that made all group members happy. He had a fairly agreeable group to work with but he also had one low status kid that tends to give most people trouble. The few potential problems were straightened out before they even got started.

In terms of this child’s learning behavior, I would say he was very active in the construction of all the activities and learned a lot. Not only did he learn a lot about the space content but he also learned a lot of invaluable social skills that I hope he will carry with him for life. When it came time to identify the abilities during the wrap up each day, I noticed that this child was naming mostly social abilities. I would guess that he found himself using these abilities each day in order for his group to get the task done and be successful.

Another child I wrote about, B8, is a child who perceives himself as high status. This child constantly interrupts his teachers, classmates, parent helpers, and even administrators, if he has the chance. This habit became a real problem during the CI activities. Not only does he interrupt; he is very bossy and likes to take charge. Being fully aware of these characteristics, I put him in the resource job role. I knew that he
would take full advantage of the facilitator or reporter roles. Interestingly, it was as though the job roles did not apply to him. He still tried to take over the entire project and planning process regardless of my constant reminders to stick to the job roles. Unfortunately, his group got so upset and frustrated with him that they began to reject all his ideas. He is a smart kid and has the potential for being a great group member but his entire disposition turns others away. He argued with others, put down their ideas, and made the whole experience less fun for the group. When he argued, he became louder and louder, until he was shouting at his group members. This all occurred on the first day and I ended up removing him from the group. I had made a policy, based on similar experiences during collaborative group activities, that if anyone yelled, argued, or disrupted the group, they would be removed and would watch their group work successfully and without the disruption. I removed him from the group on the first day and he was upset, but he stood there and watched. His group had no problems once he was removed and he noticed this. He got to join in again on day two and it was like he was a different kid. I even heard him say, “This is the best groupwork this group has ever done!” I think he was probably able to learn the most from these rotations. He got to learn how to work effectively in a group and was able to express his vast knowledge in a creative way, which is right up his alley.

B11 is the last child I focused on during the Complex Instruction rotation. As you can see from my chart, B11 had absolutely no status in the classroom. He was trying to participate and his group really did a nice job of including his ideas. The problem arose when one of this student’s ideas did not get included in the project. He became extremely angry and hostile toward his fellow group members. Then he would begin to either yell or cry and his group members simply began to get very frustrated with him. Needless to say, his outbursts did not help his status treatment within his group. I actually ended up removing him from his group on the first day of the rotation. He was hindering his groups’ progress. I made him watch his group get along and make joint decisions. He was an entirely different person on day two. I’m not sure if it was because he didn’t want to be removed from the group or if it was due to the modeling his group did of how to work well together.
Table II

Pre/Post Test Data

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PRE/POST RESULTS

As you can see from the attached graph, my post tests scores increased fairly dramatically. I was very impressed and pleased with the results. This assessment was based on a 12-point scale. Even though there were only four possible points, each plus and minus counts as one point as well. So, getting a 2 plus is like getting a 6 on the assessment. When I administered the posttest, I told the kids to really think about what they had learned during our week of CI. I told them to write down everything they could think of and the length and depth of the answers was outstanding. I scored the tests with my mentor teacher based on a rubric that I created for these tests.

CONCLUSION

When the Complex Instruction was first introduced to us in our Classroom Management class, I was a little overwhelmed and slightly curious as to how this task would unravel. I never envisioned the comforting chaos of the first rotations of the last minute culmination of found materials. But above all, I never envisioned the personal success and high achievement of my students that suddenly hit me like a ton of bricks as I was compiling the final data. It wasn’t until this time that I was able to look back on the whirlwind of activities that had taken place during this monumental week. I had hoped to provide a safe and comfortable learning opportunity for all my students. Through complex instruction, I was able to do that and so much more. My students, both high and low status, were comfortable, participating, and contributing members of the classroom society. They were achieving, they were motivated, and they learned. This week of complex instruction opened my eyes to the influence of group membership, the power of status treatments, and the significance of singling out all the wonderful abilities that may not be so obvious. I am grateful I had this opportunity and I can only hope you have the same chance to change so many lives and fill these young ones with the motivation to learn and grow.
Appendices
Sun, Moon and Earth
Key idea: The sun, moon and Earth are all connected and related

Activity One: The sun takes a vacation

Activity Card

The sun, moon and Earth are connected in many ways. The sun gives us light every day and helps to warm our Earth. The light from the sun also reflects off the moon to make it stand out in our night sky. Use the information provided and your information from class (what you already know) to help answer the following question.

- What would happen to the Earth and the moon if the sun did not shine for one week in the month of February?

Questions to think about:
- How would you know if the moon were still in the solar system?
- How would this affect people’s every day lives?
- How would the time of year affect what would happen?

Your Task: Create a model using the provided materials to display your answers and thoughts.

Materials: flashlight, clay, grass (dead and fake), paper, shoebox, straws, aluminum foil, buttons, paper tubes, cereal boxes, thermometer

Evaluation Criteria
- Your model shows more than one idea your group has thought of.
- Your model shows how the Earth and people will be affected.
The Earth, Moon, and Sun are very important to each other. Can you imagine what our solar system would be like if one was missing? All of them have decided that they have had enough of our solar system. They have decided to go away and explore other galaxies and solar systems, one at a time. The sun has decided to go and explore first. The Earth and Moon are sad but are all set to say goodbye. Suddenly they begin to realize how much they need the sun and decide to hold a debate for the entire solar system. In this debate, the Earth and Moon need to prove to the sun that they need it to stay. This debate must prove how important the sun is or the sun might decide to leave and the Earth and Moon may be in great danger!

MATERIALS:
Paper, pencils, books, nametags.

PROCEDURE:
1. First, you must decide who is going to be the Sun, Moon, and Earth. The entire group must help find important information in the resource books. It may be helpful to take notes as you go. It will also be helpful to choose a debate moderator. This person will keep the debate going smoothly and will make sure everybody gets a chance to speak. A debate summarizer will also be important. This person can help to keep track of all the important points made during the debate. So, when the Earth explains why the Sun can’t leave, the summarizer will keep track of that.

2. The Earth, Moon, and Sun will all take turns pretending they are going to leave the solar system. The other two will have to tell the group why this object can’t leave the solar system. They will have to explain what would happen to them if this object actually left.

3. Keep going until all three, the Earth, Moon, and Sun, have pretended to leave the solar system. Prepare your debates or information in a way that is easiest to make a convincing argument explaining what would happen to the remaining two if one was to leave.
Sun, Moon and Earth

Key idea: The sun, moon and Earth are all connected and related.

Activity Three: Moon Mission

Activity Card

In 1969 people from the USA first visited the moon. They had to wear specially designed suits so they could breathe and be comfortable. Without these suits they would not have survived because the surface of the moon is very different than the surface of the Earth.

Discuss:
- What adaptations would a person need to have to live comfortably on the moon?
- What changes might need to be made on the moon so it could support life?

Your Task: Build a model of what a community would look like if we could build one on the moon.

> Things to think about:
  - How would we breathe?
  - What would we eat while we lived there/how could we grow food?
  - What would we use as shelter?
  - What would we do for fun?
  - How would we get water?

Materials: clay, paper, shoebox, straws, aluminum foil, buttons, paper tubes, cereal boxes, plastic bowl/dish, fake grass, balloons, anything else your group finds useful that teachers approve of.

Evaluation Criteria
- Model shows how to eat/drink, breathe, and have shelter on the moon.
- Model clearly shows your group’s plan for survival on the moon.
Key Idea: The Earth, Moon, and Sun are connected and related.

Activity 4: Space-mobile!

Activity Card

The Earth, Moon, and Sun are connected and related but have very different features. The atmosphere, temperature, amount of gravity, and surface conditions are just a few of the major differences between them. Your group has decided that they would like to be able to travel to and move around on all three of these places. Your job is to investigate how such travel could take place and to create a space-mobile to help you reach this goal.

MATERIALS:
Cereal boxes, toilet paper rolls, tin foil, chips, egg cartons, cardboard, pipe cleaners, other helpful materials that may be in the room.

PROCEDURE:
1. Together, discuss what features your space-mobile would have to have in order for you to be able to travel to and around the Earth, Moon, and Sun.

2. Create a space-mobile out of the box of materials. (It does not have to look or run like the automobiles we are used to.)

3. Be able to explain how each part of the space-mobile helps you out in each place.
1. How are the Earth, Moon, and Sun important to each other? Give examples.

2. What are important things you would need to live on either the Sun or the Moon?