Making Groupwork Work: Ensuring Instructional Efficacy in the Student Teaching Internship Through the Implementation of Complex Instruction

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Why Do This?
- New course
- Desire to make a difference in the lives of schoolchildren as a teacher educator
- Work creatively with various requirements from state and ncate to make accountability a little easier for my students
- Fascination with Complex Instruction

How it happened ???
- Started with an overall concept
  - "Learning happens at the intersection of the social and academic structures in a classroom"
- Grounded my ideas in two good theoretical construction
  - "nothing is as practical as a good theory"
    - Complex Instruction
    - Positive Discipline

Course Overview
- Classroom Structures
  - Identify social order of the classroom
  - Articulate the academic structure
  - Identify focus children
- Discipline
  - Examine misbehavior as part of a system
  - Create encouraging climate
    - Focus on multiple abilities and competence
- Complex Instruction
  - Design and carry out a rotation of activities
  - Conduct pre/post content assessment

Complex Instruction
- Sociological in origin
- Opportunity to participate in groupwork depends upon whether you have status in the group

Status, continued
- "Status" is specifically defined as a measure of co-status
  - Status = Academic Status + Peer Status
- Sociometric Measure
  - Academic Status: number of times you are chosen in response to the question, "Who is the best reader in the class?"
  - Peer Status: number of times you are chosen in response to the question, "Who would you invite to your birthday party?"
- Status Order: class ranked according to number of times chosen
Status equalization in process...

CI continued...

- Groupwork
- Rich tasks
- Collaborative norms
- Group Processing Roles
- Status Treatments
  - Multiple ability treatment
  - Treatment of assigning competence

Mary’s chart

Multiple Ability Treatment

- Create rich activities around a big idea
- Design in multiple abilities
- Connect to abilities possessed by low status children
- Make the abilities public during orientation, learning activities, and wrap up

Multiple ability treatment

Assigning Competence

- Identify the multiple ability
- Make the assignment public
- Tie the ability to the successful completion of the group task
- Connect the ability to a valued job or profession
Assignment Competence

Assignment Competence, continued
- Misbehavior is an effort to get back into 'the group'
- Four goals: agm, power, revenge, assumed disability
- Context needed
  - Strength based vs. deficiency focused
  - Encouragement vs. praise
  - Social problem solving through classroom meetings vs. punishment

Positive Discipline
- Adlerian Theory interpreted by Driekurs and others
- Assumptions
  - All behavior is goal directed
  - Behavior has psychosocial origins
  - A human need is to be a member of a group

Supporting the strengths...

Assignments from a CI perspective
- Analyze classroom structures and choose focus children
- Learn how to use multiple abilities and assign competence in the context of the classroom discipline model
- Carry out a CI rotation with pre/post measures of content acquisition

Course epistemology
Bottom line

- Three different activities that addressed a content idea
- Taught simultaneously
- Pre/post measures of content acquisition
- Assign competence

So how did it work out...

- Three individuals
- Three perspectives
  - Nancy
  - Liza
  - Gillian

School Demographics

Spencer Street School is located in Northern Vermont. It houses grades pre-kindergarten through fifth with 457 students, 23 classroom teachers and 18 instructional assistants. The city in which Spencer Street School is located is Vermont's most welcoming community. Its school population has grown at the rate of four percent annually. The growth will continue for eight to ten years. This city is one square mile and is the home of five large federally supported housing complexes, a sixth is under construction and a seventh is under-going a massive rehabilitation program. I speculate that this city has the largest percentage of subsidized housing of any school district in Vermont.

Classroom Demographics

- Grade 4
- 23 students: 14 boys, 9 girls
- 5 students on IEPs
- 2 students Emotionally Behaviorally Disturbed
- 2 students who have ESL
- 1 student with an auditory processing disorder
- Homelessness, physical abuse, neglect, drug addiction, alcoholism

- This city has 32.5% of single-parent families, which is almost double the Vermont average.
- 31.4% of its children under 18 years old living in poverty, which is 2.5 times the Vermont average.
- 62% of the elementary school population is eligible for free lunches; thus, two out of three students live in low-income homes. The elementary school population eligible for free lunches has been as high as 76%.
- About 35% of our elementary school population turns over every year. This means that each classroom has six to eight different faces in June that did not start the year in September.
- The elementary school Special Education population is in excess of 16%. 
First Reaction

- Hesitation
- Many questions
- Trust
- Unaware

Assessing Status Order

To complete my survey I created four questions. Question 1 and question 2 assessed peer status. Question 3 and question 4 assessed academic status. The following is a sample survey:

Name:
1. Who would you invite to your birthday party?
2. Who would you like to play with after school?
3. Who are the good readers in our class?
4. Who is good at math in our class?

Status Order

<table>
<thead>
<tr>
<th>Name</th>
<th>Peer Status</th>
<th>Academic Status</th>
<th>Co-Status</th>
<th>Rank</th>
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</thead>
<tbody>
<tr>
<td>Caroline</td>
<td>25</td>
<td>38</td>
<td>63</td>
<td>1</td>
</tr>
<tr>
<td>Tim</td>
<td>21</td>
<td>18</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td>Jill</td>
<td>13</td>
<td>21</td>
<td>34</td>
<td>13</td>
</tr>
<tr>
<td>Chris</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

Design Plan For Complex Instruction

- During week 13 of my student teaching internship students participated in Complex Instruction.
- The CI rotations took place each morning over five days from 8:20 AM to 9:05 AM.
- The CI unit blossomed from five map lessons the students participated in during my solo teaching weeks. Students showed great enthusiasm and interest during these lessons. Therefore, I designed three activities for this CI unit based on maps.
- The big idea was “Finding Our Way”.
- Cooperating Teacher did not participate

Multiple Abilities

- Ability to discuss a picture
- Ability to notice detail
- Ability to summarize
- Ability to make connections
- Ability to see a perspective
- Ability to apply knowledge from another source
- Ability to diagram mathematical ideas
- Ability to spot differences in pictures, diagrams, or graphs
- Ability to make a model
- Ability to record data accurately
- Ability to observe carefully
- Ability to measure exactly
- Ability to break a task into its parts
- Ability to think through a plan
- Ability to reason
- Ability to predict a possible solution

Activities

- Activity 1: Wally World
- Activity 2: The First Americans
- Activity 3: Around The World
Pre-test

- 6 point scale
- Questions 1-4: Measured students' ability to locate points of interest on a grid map
- Questions 5-6: Measured students' ability to define latitude and longitude

Roles

- Facilitator
- Reporter
- Recorder
- Materials Manager

Norms

- You have the duty to assist anyone who asks for help
- No one of us is as smart as all of us together
- You have the right to ask anyone in your group for help
- Pay attention to what other group members need
- Everyone is good at some of the abilities
- Everyone helps

Complex Instruction in Action

This is a picture of five engaged students in a complex instruction learning activity. They are working to trace the route the first Americans took when fleeing south through a valley between glaciers.

Complex Instruction in Action

This is a picture of three active students in a complex instruction learning activity. They are working to identify the latitude and longitude of the seven largest cities in the world.
### Post-test

<table>
<thead>
<tr>
<th>Name</th>
<th>Pre Test Score</th>
<th>Post Test Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caroline</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>Tim</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jill</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>Chris</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Class Growth Average: $52/21 = 2.48$

### Effect on Focus Children

- Caroline - excellent model
- Tim - one CI rotation only
- Jill - extremely successful
- Chris - increase in participation

### CI Assessment

- Biggest challenges were time management and sitting on the sidelines.
- Increase in student motivation and interaction.
- Students participation far exceeded expectations.

### Conclusion

At the beginning of my student teaching internship I set three goals for myself:

- Provide a safe environment for children to learn
- Support my students' growth as learners
- Support my students' growth as people

CI helped the students and myself achieve these goals!

### Chilly Hill School

- Urban setting in Northern Vermont
- 294 total students
- 12 classroom teachers, 6 other teachers, and 5 instructional aides
- 7.1% of students are eligible for special education services
- 35% receive free or reduced lunch
- Median family income is $44,662

### Status Order Survey

- If you could invite one person in the class to your birthday party, who would it be?
- Who would you most want to work with on your reading homework?
- How many pets do you have?
- How many brothers and sisters do you have?
- Where is the farthest place you have traveled to?
Status Order~Focus Children

- B4: a high status boy who consistently works well with others. He received two academic status votes and two peer status votes.
- B8: a boy who perceives himself as being high status but in actuality, only received one vote total, a peer status vote.
- B11: a boy who did not receive any status votes, either academic or social. He is constantly in trouble and tends to instigate issues with his classmates.

Why These Focus Students?

I chose these students because they all interacted very differently with their peers and teachers. I thought that since they were all such different individuals, the affect of Complex Instruction would be interestingly different for them all. I wanted to see how CI affected not just the low status students that it targets but also the high status, high achievers.

Complex Instruction

- Four days during my thirteenth week in the classroom.
- One hour to an hour and a half each afternoon.
- One rotation with four activities targeting the big idea: How are the Earth, Moon, and Sun connected and related.
- Groups of five students.

Collaborative Norms

I introduced some collaborative norms into my classroom setting during the fourth week of my student teaching experience. These norms were introduced early on so the students would feel comfortable with them and begin to use them in all academic contexts.

- Nobody is as smart as all of us together.
- Everybody helps.
- Everybody has the right to ask group members for help.
- Everybody has the duty to assist a group.

Pre-Data

To gather my pre-data I asked two simple questions.

- How are the Earth, Moon, and Sun important to each other? Give examples.
- What are important things you would need to live on either the Sun or the Moon?

The Rotation

- Activity One: The Sun takes a vacation
- Activity Two: Who needs Whom?
- Activity Three: Moon Mission
- Activity Four: Space-Mobile!
Challenges

- Extremely hands-on activities
- Very little structure, open ended tasks
- Fairly large groups
- Diverse groups
- Job roles
- What to do with those that cause problems in the group so that others learning is affected.

Assigning Competence

Assigning competence was one of the hardest parts of CI for me. With so much going on, it was hard to observe all of the wonderful multiple abilities that were going on around me. It was also hard to make it sound realistic and to connect the ability to a real-life job or occupation.

Multiple Abilities

- Making a list
- Giving ideas to the group
- Brainstorming ideas
- Communicating with group
- Using materials
- Making a sketch or a design
- Being focused on the task
- Respecting one another
- Recognizing and using talents
- Helping others

Post Data

- To gather my post rotation data, I gave my students the same two questions as the pre-test.
- My average gain score from pre to post test was 3.5 out of 12 possible points.

Conclusion

- There is significant evidence that learning took place during the four day Complex Instruction rotation.
- My students were able to identify and recognize many social and academic abilities.
- By recognizing this variety of abilities, they began to see how important each person was as a contributing member of the group's success.
Sloan Elementary School

Rotation Station: Implementing Complex Instruction

Prior to CI

- Unaware
- Overwhelmed
- Intense
- Trust

Class Demographics

- 3-4-5 Multiage
- 17 Students: 11 Boys, 6 Girls
- 6 in 3rd, 7 in 4th, 4 in 5th
- 3 Adults in Room
- Many with Inconsistent Home Lives
- Education Plans

Academic Structure

- Student Choice
- Student-Directed Learning
- Unsuccessful Time Management
- My Goals for Student Teaching
- Thought I Knew the Status Order!

Assessing the Status Order

- Seating Charts
- Survey-Private and Useful
- Focus Children: N=17

<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Peer</th>
<th>Co-Status</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zack</td>
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<td>0</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Emily</td>
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<td>2</td>
<td>5</td>
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<tr>
<td>John</td>
<td>8</td>
<td>7</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Lucy</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>
## Getting Ready for CI
- Teaching Mentor
- Skill Builders
- Norms
- Pre-CI Activities

## Content
- VT History Unit
- Non-Native: Research
- Colonial Times Learning Center
- Conferences with Charlie, Nervous
- 4 days, 40-50 Minutes

## Task Cards
- 4 Activities Simultaneously
- Tape Recorded
- Venn diagrams
- Evaluation Criteria

## Rotations
- "Rotation Station"
- Pre-Test
- Orientation
- Task
- Report Out

## Multiple Ability Treatment
- Creating a song
- Gathering information
- Performing a skill
- Listening to the tape to get facts
- Looking for information in encyclopedia
- Reading from the resources
- Creating interview questions
- Deciding which materials were needed
- Working together to design a poster
- Drawing a comic
- Taking notes on an activity
- Organizing Venn diagram
- Cooperating to Plan report outs

## Assigning Competence
"Wow, Zack. By writing information from the encyclopedia down, your group will be able to share a lot of facts with the class. That will help make a great report out. People who are good reporters take notes and that's how we learn about the news"  
- Helps lower status students become integrated in group
- Assigned to higher status students to equalize status
The Gain scores are evidence that CI works. The average gain score was 45.7%.

Goals fulfilled: knowledge gained on how life has changed for Vermonters, collaborating, peer mentoring and using the multiple ability/assigning competence treatments to engage all learners.

Students teach and learn from each other
All students benefit
Integrate students into both the academic and social structure of the class
Students see abilities and hear competence
Talking + working = Learning!
Taught mentor and completed a complimentary unit

Students autonomous
Conflicts over groupings/roles
Behavior Management
Being quiet!!
Are they learning?? Is my mentor satisfied with the results? Am I completing the requirements for the project... what is the project, really??
Results, continued

- 48% interns completed pre/post testing
  - ~211 out of 216 schoolchildren had positive increase on post-test learning measures
- Overall
  - Something I’ll use again (80%)
  - Positive (79%)
  - Changed how I looked at things (70%)
  - Hard work (65%)
  - Boring (0%)
  - Not at all useful (0%)
  - Just another teacher req. fulfilled (0%)

Results for website use

- 86% used site at least once
  - 45% used at least three times
  - 42% used it more than three times
- Most frequent use
  - Reading syllabus, reading assignments
- Least frequent use
  - Accessing other links and linking to library readings (non-required aspects of course)

Conclusions

- A key to increasing the right kind of participation for marginal children is to look to the group as causative
- Student teachers can be taught to analyze classroom structures and construct more equitable learning environments
- Teacher educators can be conduits to make a real difference in the lives of students in the public schools

This is just a beginning ...