Collaborate
About Clustering
Courtney Mayer
&
Kim Stewart
Northside ISD
Research:
Robison (1998): the most neglected student in heterogeneous classrooms (in terms of reaching his/her true full potential) is the student who is gifted in mathematics
Brulles, Cohn, and Saunders (2010): gifted students in gifted cluster classes demonstrated consistently significant achievement growth regardless of demographic group
Swiatek (2001): gifted students who were grouped into classes with other gifted students learned more in a year than students who had classmates of varying abilities
Saunders (2005): achievement of gifted cluster attributed to more complex and challenging curriculum, as well as to receiving more teacher attention

Survey results: 345 parents- GT class allows a safe place for child to be themselves (cluster class would provide that opportunity all day, everyday); over 1,200 elementary students expressed the same perspective!
Focus group findings:
Many students drawn to charter schools because: lack of rigor in regular classroom, STAAR driven curriculum, lack of differentiation
Solutions: accelerated and/or advanced math, science, reading; enrichment opportunities; more accountability for teachers to DI for advanced learners; educate more teachers as to the learning needs of GT students;
implement a “customer service” mentality

NOTE: Teacher training is a critical component to the success of the cluster program model!
Teachers need to differentiate math lessons focused on intervention rather than enrichment. Instructional support was mainly push in and pull out for students in need of assistance or STAAR achievement.
- Access to learning at higher levels of depth and complexity
- Allows for collaboration with like-minded peers and social connections (Lawless, 1998; Rogers, 2006; Tieso, 2003)
- LRE: Least Restrictive Environment for gifted learners (Brody, 2004)
GT Specialist: liaison between CO and cluster teachers; shared collaboration with cluster teachers and math specialists; support for cluster teachers in differentiating for gifted learners; support contact—may be getting into classrooms during math times periodically, may be attending planning sessions with teachers to ensure DI is happening; may be designing critical thinking enrichment lessons/activities for classes to use—this is as opposed to pull-out enrichment sessions), *there should be SOME time built into schedule to be in these classrooms (this is in lieu of the enrichment previously conducted

Math Specialist: shared collaboration with cluster teachers and GT specialists; support for cluster teachers in differentiating for advanced math students; Support cluster teachers in classrooms during math times regularly, attend planning sessions with cluster teachers to ensure DI is happening; may be collaborating to design critical thinking enrichment lessons/activities for cluster classes to use. Initiate and facilitate the creation of math pre assessments by unit.
Rejoice!

Setting up a positive climate

Focus on these three to begin the year:

● Conversation about composition of the class: students who think differently- discourage elitist perspective!
● Growth Mindset- appropriate feedback is to praise effort, not result- avoid “You’re so smart” comments; do NOT expect perfect work from gifted students - rather encourage them to try difficult and even frustrating tasks
● RELATIONSHIPS! Get to know students and how they learn (resource: interest inventories)
● Clear, consistent communication with parents
● Avoid labels
Class Composition

<table>
<thead>
<tr>
<th>KG</th>
<th>1</th>
<th>A(1)</th>
<th>KG</th>
<th>1</th>
<th>A(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>A(1), B(2), C(1), D(1)</td>
<td>1</td>
<td>4</td>
<td>A(4)</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>A(1), B(2), C(3), D(2)</td>
<td>2</td>
<td>10</td>
<td>A(6), B(4)</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>A(2), B(4), C(3), D(2)</td>
<td>3</td>
<td>7</td>
<td>A(3), B(4)</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>A(2), B(2), C(2), D(2)</td>
<td>4</td>
<td>14</td>
<td>A(7), B(7)</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>A(3), B(3), C(2)</td>
<td>5</td>
<td>13</td>
<td>A(7), B(6)</td>
</tr>
</tbody>
</table>
Suggestions For Grade-Level Distributions:

<table>
<thead>
<tr>
<th>Classroom</th>
<th>Gifted</th>
<th>High Average</th>
<th>Average</th>
<th>Low Average</th>
<th>Far Below Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom A (Clustered GT)</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Classroom B (Clustered GT)</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Classroom C</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Classroom D</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Classroom E (Collab)</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>
What about the other classes?

- Teachers overwhelmingly report that new leadership “rises to the top” in the non-cluster classes.
- There are many students other than the gifted who welcome opportunities to assume available leadership roles.
Key Components: Teacher Training

- Depth and Complexity
- Math Exemplars
- 6 Thinking Hats
- Social and Emotional Needs of Gifted Students
- Menus and Choice Boards
- DOK Differentiation
- Fun ways to Engage your Brain
- Exemplar lessons
To save money, a trainer of trainers model was incorporated this year.
All important...this is THE most important- good for ALL students.
Every teacher receives magnets- we cover each element at the first training (in general terms, then applied example to math)- frames
Day 2 has a “2.0” piece, and each campus receives the Q3 card set, which is a great resource for teachers to use to ask higher order thinking questions (rooted in depth and complexity)
We purchase this product which aims to provide hands-on, performance-based instructional materials that focus on authentic learning in math, science, and writing. These materials engage students and promote reasoning, communication, and higher-order thinking.
Designed by Edward deBono- a parallel thinking process that separates thinking into six functions or roles. The idea is that by mentally switching hats, people can be more focused in thinking objectively, generating ideas, and maximizing productive collaboration.

Following the training and practice session, teachers receive a set of posters for their classrooms.
We feel it’s important to address this topic at each training session. Day 1- general conversations about asynchronous development, perfectionism, imposter syndrome, social issues, anxiety, introversion, underachievement, multipotentiality and more. We have more of a “deep dive” into some of these topics at consequent training sessions.
Menus and Choice Boards

Laurie Westphal book series: Differentiating Instruction with Menus (provide one book for each campus for K-2 and one for 3-5 - MATH only)
Invited author to come present
Building a storehouse of menus for different grade levels and math topics - each teacher/team develops a menu of advanced level activities and shares in a district-wide folder
Webb’s Depth of Knowledge

Year 1—provide teachers with math TEKS charts—review the four quadrants of Webb’s DoK and teachers apply to a particular menu type (appetizers (1)-entrees(4)-sides(3)-desserts(2))
Year 2- build upon their knowledge with the Rigor and Relevance Framework (combines Bloom’s Taxonomy with Dr. Bill Dagget’s application model)- ensure teachers can plot their curricular activities into grid
Fun Ways to Engage Your Brain

Warm Up’s like plexers, Math Games
Hink Pinks

A white peppermint candy without stripes is a _____ _____.

A really great looking evergreen is a _____ _____.

The extra cash that Santa keeps in his shoe is his _____ _____.

1. Plain Cane
2. Fine Pine
3. Boot Loot
2. Oh Little Town of Bethlehem
3. What Child is This?
4. Oh Holy Night
Processing time, effective questioning, Ian Byrd’s articles on questioning, Q3 cards, Learning Pit Video
Transformations, Christoph Neimann PowerPoint, forced connections (Synectics)
Personification Questions, Sir Ken Robinson video, RAFT writing, Scamper
A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.

A microscope is not a microscope when it is a clip or a earring.
Christoph Nieman transformation (objects)
Go through these with the participants then say “Why? What does that mean? Tell me more.”

Gravity like a hamburger
Black holes like slamming doors
Umbrella like a birthday cake
Personality like cereal
Commas like a rainstorm
Ecosystem like a car
Water cycle like a bike
Pythagoras Theorem like a cow grazing in a field
Encourage students to uncover their own voices and formats for presenting their ideas about the content they’re studying
Role - Who are you as the writer?
Audience - Who are they writing to?
Format - What type of writing is being created?
Topic - What’s the subject of this piece you are writing? What are you writing about?

Mode- letter, email, speech
Purpose- my agenda…what I want to accomplish
Homework and present lesson and add to shared folder
Talk at your table about which of these you already do with your students and/or teachers, which you could incorporate, and what strategies you use with gifted learners that we did not review. Share out?
Is it working?
4th Grade
MaC-GT Cohorts 1 and 2
(GT students)

- 80.2%
- 73.8%

- 3rd Grade 2018 STAAR
- 4th Grade 2019 STAAR

Percent Masters
Progress Measure  5th Grade
MaC-GT Cohorts 1 and 2 (GT students)

<table>
<thead>
<tr>
<th>Growth Type</th>
<th>4th Grade 2018 STAAR</th>
<th>5th Grade 2019 STAAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Growth</td>
<td>26%</td>
<td>4%</td>
</tr>
<tr>
<td>Expected Growth</td>
<td>40%</td>
<td>38%</td>
</tr>
<tr>
<td>Accelerated Growth</td>
<td>34%</td>
<td>59%</td>
</tr>
</tbody>
</table>
Did we give lift to non-GT students by clustering them in MaC-GT?
Non-GT Students: Masters

Clustered Campuses:
- 2018 STAAR: 21%
- 2019 STAAR: 43%
- Increase: +22%

Comparable Campus Demographic:
- 2018 STAAR: 13%
- 2019 STAAR: 22%
- Increase: +9%

District:
- 2018 STAAR: 19%
- 2019 STAAR: 33%
- Increase: +14%
Non-GT Students: Limited Growth (+0)

- Clustered Campuses: -32% (2018 STAAR), 15% (2019 STAAR)
- Comparable Campus Demographic: -23% (2018 STAAR), 23% (2019 STAAR)
- District: -26% (2018 STAAR), 18% (2019 STAAR)
Non-GT Students: Accelerated Growth (+2)

- Clustered Campuses: +28% (2019 STAAR) - 18% (2018 STAAR)
- Comparable Campus Demographic: +31% (2019 STAAR) - 20% (2018 STAAR)
- District: +36% (2019 STAAR) - 18% (2018 STAAR)
Did we give lift to GT students by clustering them in MaC-GT?
GT Students: Limited Growth (+0)

- Clustered Campuses: 3% (2018 STAAR), -28% (2019 STAAR)
- Comparable Campus Demographic: 11% (2018 STAAR), -21% (2019 STAAR)
- District: 5% (2018 STAAR), -18% (2019 STAAR)
Did we do harm to students in other classes by removing GT students from their classes?
Non-GT students in non-MaC-GT classrooms: Masters

- Clustered Campuses: 12% (2018), 24% (2019), +12%
- Comparable Campus Demographic: 13% (2018), 22% (2019), +9%
- District: 19% (2018), 33% (2019), +14%
Non-GT students in non-MaC-GT classrooms:
Limited Growth (+0)

Clustered Campuses: 24% (+19%)
Comparative Campus Demographic: 23% (-23%)
District: 18% (-26%)

- 2018 STAAR
- 2019 STAAR
Non-GT students in non-MaC-GT classrooms:
Accelerated Growth (+2)

<table>
<thead>
<tr>
<th>Category</th>
<th>2018 STAAR</th>
<th>2019 STAAR</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clustered Campuses</td>
<td>14%</td>
<td>35%</td>
<td>+21%</td>
</tr>
<tr>
<td>Comparable Campus</td>
<td>20%</td>
<td>31%</td>
<td>+11%</td>
</tr>
<tr>
<td>Demographic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>18%</td>
<td>36%</td>
<td>+18%</td>
</tr>
</tbody>
</table>
Talk at your table about what you saw in the data. Thoughts?
Don’t take our word for it
What have NISD students said about clustering this year?

• “I think it is a great idea. The class moves faster, it is richer, and I feel more challenged. It also sorta gives a middle school feel. Having different kids for a different class. I do enjoy everybody working at the same pace, and being at the same math level. I would give it five out of five stars. I hope this keeps going for future fifth-graders.” – Student

• “It is obvious that the other kids in the classroom are also benefiting from having us all together” - Student

• “I am VERY happy about this school year! I have made friendships, and I still think that there are more FRIENDS and more HAPPINESS to come” – Student
What have NISD teachers said about clustering this year?

- “The pilots have been beneficial to students in the areas of increasing rigor in problem solving skills as well as deeper critical thinking skills within each grade level's TEKS.” -Teacher

- “I think that the students that are not GT but are high achieving students got a lot out of this program. Even some of the medium kids stepped up to the plate. I enjoyed and have implemented the choice boards, and more of a differentiated approach based on the kids needs and interests.” -Teacher
Hi there,

I'm Ruby Salazar, I teach 1st Grade at Boone Elementary. First, I'd like to say that I'm loving the program. There hasn't been a day that I don't LOVE coming to work- like SERIOUSLY! My kiddos are so much fun to work with. They continuously and consistently keep me on my toes. I find that I am learning from them just as they are learning from me. Some of the things I often hear come out of their mouths are things like, "I want mine to be out of the box thinking." or I'll walk by and hear the inner workings of their minds as they are pondering to themselves -(out loud) how to make things better or bigger or more challenging for each other. I LOVE IT!
Timeline:
Year 1: 5 campuses
Year 2: 8 campuses
Year 3: 18 campuses
Year 4 and beyond: 18 campuses until all are MaC-GT
Resources

- Byrdseed TV Subscription
- Byrdseed poster
- Depth & Complexity Magnets
- Exemplars
- Differentiating Instruction with Math- Menu book
- Q3 Cards
- Think Tank Box
- 6 Thinking Hats Posters
Courtney Mayer (Director of GT and Advanced Academics):
  • [courtney.mayer@nisd.net](mailto:courtney.mayer@nisd.net)
  • 210-397-8631

Kim Stewart (Instructional Support Teacher for GT and Advanced Academics):
  • [kim.stewart@nisd.net](mailto:kim.stewart@nisd.net)
  • 210-397-3559