RISK TAKING & FAILURE IN DIFFERENTIATION

SHIFTING MATH MODELS

Elana Willig
Yvonne Ostrov

Perspectives on Failure

Working on this project provided us with the opportunity to develop greater clarity of what failure means to us and this clarity is the driving force behind our submission outline below.

Failure is a specific point in time when one is unsuccessful with what s/he set out to do. At that time the individual is faced with a choice: Choose to give up and the project is doomed to failure for eternity, an end point. Choose to use it as an opportunity and the failure quickly becomes a challenge with potential for greater success. Failure is an opportunity for growth, learning, and accomplishment. This project has led us to reflect and refine our work as we embrace our failures and use the lessons learned to shape our future plans.

The Pull-Out Model

For years, MDY has aimed to support the broad range of learners in math classes by pulling out the strongest and weakest students from their classrooms. In doing so, teachers were able to target their instruction to the narrow range of learners in the room and thereby support all learners in moving forward in math. There have always been challenges with this model and we kept asking ourselves if the model was really accomplishing our stated goals:

- ➔ *Are we really meeting the needs of all of our students?*
- ➔ *Are all of our students given the opportunity to learn math at the highest possible level?*

Terms that will be used throughout this paper and what they mean

- Above Level class - students who were pulled out of the class because they demonstrated strong math skills
- Below Level class - students who were pulled out of the class because they struggled in math
- Math teachers - teachers who teach the above and below level classes
- Math specialists - teachers who push into the classroom during the math period
- Classroom teachers -head teachers who teach the class all general studies subjects

Challenges with the Model

- The pull-out model reinforced a fixed mindset. Students in the above level group identified themselves as “smart” and as a result were occasionally unwilling to take risks in front of their peers. Students who were in the below level group believed they could not yet do what the class was doing because they were identified as the struggling students.
- There was little flexibility in the model. Students were assessed three times during the year to determine their correct placement, and yet, few students switched groups. If a student was recommended for placement back in the main classroom from an above or below level class, this was challenging. The below level class was often behind in the curriculum and the student would be missing skills and concepts. When students were shifted back to the main class from the above level class, they took it to mean they were not “smart” anymore and they had a hard time dealing emotionally with the change.
- Student in different math levels left their classrooms and traveled three or four floors to their math classrooms. We lost precious learning time in the transition. Many younger students struggled to remember to bring all of the necessary materials for class.
- Below level math teachers had lower expectations of their students.
- The model was often inequitable because stronger teachers were placed in the above level.
- Classroom teachers were less motivated to differentiate because they had the “middle” and the extremes were not in their classes. When students presented as struggling, teachers were quick to recommend they be moved out of the classroom as opposed to thinking about how to move them forward within the classroom.

- The below level classes often had 6-8 students resulting in a higher student teacher ratio for struggling students because the mainstream classroom had two teachers.
- Classroom teachers were not aware of how their students were doing when they left the classroom because they gave complete responsibility to the math teachers. They were therefore often unable to give parents a complete picture of the child.
- Communication was challenging between the classroom teachers and the math teachers. Math teachers were often unaware of behavior plans that were in place for their students by the classroom teachers or how teachers approached challenges that arose with their shared students.
- The pull out model forced a block schedule and therefore there was no opportunity for teachers to observe each other.

The Push-In Model

In thinking about how we might better meet our students' needs, we decided to pilot a new model in our elementary school classrooms.

- ➔ Our goal was to design a model that supported all learners **in** the classroom. The model shifted from pulling students out to pushing a third teacher into the classroom. We began with a very open idea and gave teachers the opportunity to figure out how to best maximize the third person to meet the needs of all learners in their classrooms.

- ➔ Last year we piloted the push-in model for math in our 1st grade classrooms. This involved little risk because traditionally, we did not begin a pull-out program until second grade. Therefore, the only difference for the teachers was having another instructor in the room during math time. The greatest challenge this presented was how teachers could share all students and instruction and how they would convey that message to their students.. The key challenge was one of trust; that was mitigated by the fact that the team, including the math specialist, was made up of veteran teachers who had worked together for four years, but not in such a close collaborative model.

Evolution of the Model: 2016-2017

The model evolved over the course of the year. Each time we hit a roadblock, the first grade team reflected and collaborated to redefine and determine the best way to proceed. When the year began, the 1st grade math classroom looked much the same as it had previously, but now had an additional teacher who was walking around and providing support to struggling students.

- ➔ In October, the team met to discuss what was and wasn't working in our new model. Questions were raised:
  - ◆ Are we better meeting the needs of all of our students?
  - ◆ Are we maximizing the value of our teachers in the room?

In answering these questions, the teachers realized something further needed to change. The model then shifted to three small groups in the classroom. The teachers collaborated on the objectives and each teacher prepared an activity/task/number talk, using different modalities related to the objective. Students rotated between the groups. As a team, we felt like we had made significant progress toward our vision. We were maximizing our time and utilizing all of our teachers effectively. We felt we were more attuned to the needs of all of our students.

- ➔ In January, we began to ask more questions:
  - ◆ Are we better meeting the needs of all of our students?
  - ◆ What data do we have to support the work that we are doing?

Teachers determined that there was a need for more of a focus on fluency with addition and subtraction; we wanted to support students in applying strategies and number sense to solve basic facts because this is a critical foundation in first grade. Once a week, the math specialist worked with groups on fluency and tracked the data. Within the groups the students worked on strategies such as using doubles facts, make a ten, etc. They began with basic strategies and as they demonstrated proficiency, moved to more complex strategies. Another shift we made at this point was building in more individualized attention for our students who struggled most. On Fridays the math specialist would work with the struggling students individually based on identified areas of need.

- ➔ Reflecting on the year, first grade teachers were excited about what they had accomplished.
    - They had introduced more math to their students than previously.
    - All teachers had been actively involved in teaching and planning and felt ownership of their classes.
    - Students had opportunities to reinforce and practice skills through different modalities.
    - Teachers differentiated materials and instruction on a regular basis.
    - Struggling students had extra individualized support from a teacher who knew their needs.
    - Students had differentiated fluency instruction weekly (and performed better on the initial fluency assessment in 2nd grade than in the prior year.)
    - Teachers and students were excited about math.
    - Teachers wanted more data to drive their instructional decisions. They discussed the possibility of doing common formative assessments and a grade-wide midyear assessment.

Moving Forward with the Model: September 2017

Coming off of first grade, we felt confident and ready to move forward with this model in 2nd and 3rd grade. We hired additional teachers to push into our math classes in 2nd and 3rd grade.

- ➔ **Degree of Risk**:
    - The 3rd graders had experienced a pull-out model in 2nd grade and already had begun to identify themselves as the “smart” students and “struggling” students. We often find the “smart” students say they are bored or it’s too easy in the grade-level class and the “struggling” students think they need math support and should not be expected to master the grade-level curriculum. We had begun to create these mindsets with these children in second grade. Would this create an additional challenge in the classroom? How do we rebuild mindsets?
    - Parents have a strong voice. Parents of the students in the above level class often believe that in order to meet their children’s needs, the students needed to be pulled out. They like being the parents of the “smart kids,” and when the children remain in the classroom, those distinctions don’t exist. Parents of struggling students have mixed feelings. Some also feel like their children’s needs could not be met in the classroom. How would parents respond to the shift?
    - Would we be able to meet the diverse needs of all the learners in one classroom? Failure could result in a significant loss of learning and potentially additional discipline challenges because the students’ learning needs are not being met. This could create a greater gap between the struggling students and the rest of

the class. Students who are not challenged may lose motivation or develop negative feelings towards math.

- There was the concern that if implementation of the model fails, we would need to revert back to the original model with all the problems that it presented. It would reflect poorly on the school.
- The push-in model would require teachers to work in close collaboration. For teachers to collaborate effectively there needs to be trust and time. Teachers may struggle with communication and collaboration and this would impact student learning.

➔ Why take the risk?

- After detailing all the risks involved, we asked ourselves why did we take the risk?
- Although at this point, we consider ourselves at a point of failure in many areas, we believe that with this model, we have the greatest potential to provide the best math education to all of our students.
    - This model fosters more teacher collaboration which we strongly value.
    - It lowers the student: teacher ratio in the classrooms because there are at most eight students for every one teacher.
    - Working in small groups allows for more student voice and for some students, may make them feel more comfortable and safe in sharing.
    - Teachers get to know the strengths and weaknesses of each child.

- The model supports flexible groupings and allows us to group students both homogeneously and heterogeneously depending on the content and student need.
- It maximizes our learning time in a few ways: Students are not spending time “commuting” and spend the full math block learning math. When students work in rotating groups, they are able to maintain focus on the task for the allotted 12-15 minutes and there is a teacher present to facilitate that work.
- Ultimately, it can help us debunk the mindset of “smart” and “dumb” students and give all students the opportunity to achieve at their highest levels.

Reflection

Analysis of Failures

Failure	Reflection
Our weakest students are continuing to struggle to succeed. This comes out most sharply at the time of the assessment, but teachers are also seeing it in bits and pieces in the classroom.	There is minimal differentiation between the high and low students in our 3rd grade classrooms. Students on all levels are engaged in similar work. What have we done to give teachers the tools to properly differentiate and make good decisions about how to meet students' needs? What should our math meetings look like to provide teachers the opportunity to work on these challenges together? Perhaps moving forward during our weekly meeting, it would be helpful to identify our objectives and criteria for success for upcoming units and look at a set of tasks that would address the objective at different levels.
Students who grasp the concepts quickly are saying it's too easy and do not feel like they are being challenged.	
Parents of our strong math students have been calling because they feel	We did not communicate sufficiently with parents the what and the why of what we were doing. It is generally easier to get buy-in from parents at the get go if they

like their children’s needs are not being met	understand the rationale. We currently field phone calls and respond to parents as the need arises. Does it make sense at this point in time to have a conversation with the parents about our goals? Perhaps we should send a video to parents or invite them to a lunch n’ learn to share with them the rationale, the progress we have made, and our plans moving forward
Teachers do not have adequate time to collaborate.	The teachers who push in touch base with their grade level colleagues on a daily basis and generally meet with them to plan once a week for about half an hour. First and second grade teachers are able to work with the time they have because they are mostly veteran teachers who know the curriculum and have worked together as a grade level team in the past. In 3rd grade, this is much more challenging. The 3rd grade team is composed primarily of new teachers and the content is new to them. They need time to work through the content and discuss what it would look like at different levels. We should be giving them 1.5 hours a week to plan together and review student work. How might we find more time for collaboration? Perhaps we can look at the schedule together, identify times when teachers have duties outside of the classroom (ie. lunch duty) and provide coverage for them to meet and collaborate.

Teachers did not have an opportunity to build trust and community	When the first grade model took off in September 2016, there were definitely some challenges with trust. The math specialist occasionally gave students additional or different work and some classroom teachers weren't sure if that should be coming from her. The challenges looked slightly different in different classrooms. The first grade teachers had a relationship with the math specialist and this made it a lot easier to discuss the issues at hand and make it work for everyone. This year challenges are greater in teacher relationships and trust and look very different from the experience in first grade. How might we build trust among teachers? Perhaps we can incorporate trust and community building activities into our Professional Development days before teachers split up to attend their chosen sessions.

Major Takeaways

Going through this experience and reflecting on the details described above has taught us significant lessons that will impact our work moving forward.

1) Before embarking on a new project, do an in-depth risk analysis. Some of the challenges we are currently facing could have been minimized had we thought more deeply about the challenges involved and put a better plan of action in place.

2) We need to take smart calculated risks to move forward. When we fail to take risks, we risk complacency and lack of growth.

3) Trust is at the core of effective collaboration. Communication is a critical component in building and maintaining trust. The transition was easier in first grade because there already was trust within the team and they were able to immediately troubleshoot and problem solve as the challenges arose. We need to be intentional in fostering and building trust among team members.

4) In life it's inevitable to periodically fail; the challenge is to use failure as an opportunity for growth. We believe that the moment we reflect on our failures and use them as stepping stones, we have turned the failure into a challenge which propels us forward. Right now we say that our model is failing in 3rd grade, but ultimately, we hope to look back and call it a challenge as we reflect and improve on our math instruction.

Video Reflection