

Works in Progress:
An Examination of a Mark-less Classroom

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“I have a 90% in math, so I know what I am talking about” said Pete to Vanessa, and Vanessa utters back “well I have a 57% and I don’t care because I don’t even try”. In the staff room Ms. Tate asks about a student named Andrew “what kind of math students is Andrew?” Mr Dawson answers back “he has a 62%”. In the hall Carol asks “What is Ms Vim like as a teacher?” to Joanne, Joanne replies back with “she gave me a 80% so pretty good”.

Are our student’s numbers? The above conversations reduce our students to numbers. In the conversations between the two students, Pete uses the numbers to define his mathematical knowledge and to have power over another individual. It concerns me to hear these conversations in my math class, there is no conversation over mathematical content, nothing specifically that they are debating rather using numbers to equivocate power. At the same time that Pete is using his assumed to be high mark to create a power imbalance over Vanessa, Vanessa is using her math number to associate it with effort. Vanessa does not feel that she does not understand math, rather her math mark is a reflection of effort. Is this not a concern that we have not actually assessed learning objectives of an individual student rather we have evaluated the effort put forth from the student.

In the conversation between Ms Tate and Mr. Dawson we see teachers defining students by numbers. There is no description as so their learning strengths, weaknesses, their personality, their interests, rather a number that is intended to communicate something about that student.

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And that something is related to their knowledge of mathematics, but can one's ability in mathematics be reduced to a number? Another underlying concern associated with the statement between Ms Tate and Mr. Dawson is that a teacher has little information regarding the students learning in math other than a mark. Perhaps that teacher was looking for more information as to their learning requirements, as a mark does not describe what learning objectives were met and possible adaptations that were made.

The last conversation regarding Joanne's view of marks to Carol, was one that marks are given and taken away by teachers. Marks to Joanne, is an arbitrary number that has been placed upon her, she does not associate the mark received with a reflection on her understanding. This lack of association is puzzling, why does she not see the marks as something earned? Why are they a gift? Another wonderment regarding the statement by Joanne, is that she reflects the mark to be of her teacher's ability. To Joanne, the mark of 80% means that her teacher did 80% of her job, therefore did a good job. To Joanne an 80% is satisfactory as a teacher for a mark that she gives her students. So perhaps the marks are not completely arbitrary, rather a reflection on teachers.

Introduction

I am interested in examining how mastery learning and an elimination of marks impacts and shapes student learning and identity. I feel that students are pushed through concepts as teachers are pressured to 'cover the curriculum'. But at the end of the day what have students' learned, understood and enjoyed about school? They have learned that marks matter and to superficially remember content; I do not think that this conjecture of education is doing service to our students. With the removal of marks and a focus on students mastering learning concepts and constructing knowledge through a project, students can apply content knowledge to real life

activities, enjoy school and feel good about themselves. In terms of this work in progress I would like to specifically look at how students construct curriculum with other students and with teachers, the environment that enhances student learning best, and the impact of grading and student identity.

Recently in my research as a graduate student and as a teacher, I have been encountering moments of tension and I wonder how these moments are created. It made me think of how our storied lives (Clandinin et al., 2006) create our moments of tension. From our lives at home, to school, as a parent, a teacher, as part of a community; the lives we live become stories of us and we story them to others. It is the stories that we live by that bump up against other stories in our own lives or in other people's lives and these bumping spaces create tension for us. These tensions have me thinking and questioning teaching practices, assessment and knowledge itself. Tensions that I am experiencing is how I teach and direct my students, does it promote understanding? Does it promote critical thinking? Are they able to apply their knowledge? In terms of assessment; why am I grading papers? Why do I give examinations? Why are they handing in practice assignments? Are there other ways to assess and provide feedback? What am I assessing and why? And in terms of knowledge itself; what is knowledge? How is it different from understanding? How are my students constructing their knowledge? And it is these tensions in my classroom that allows me to pick up on the moments that my students are engaged, the moments they check out, the moments they are robotic, the moments that they question and the moments that they don't.

There are factors of my tension move beyond the people, from the milieu to the institution of education itself. The milieu that my students and I exist in, in the school, enhances my tensions. The milieu that I speak of are the desks, bell schedules, time constraints, textbooks,

required resources, etc. However, I think the greatest tension that I am aware of is the institution. The standardized tests, the assessment requirements, the structure of school, all create a variety of tensions in teachers, students, the subject matter and in the milieu, all aspects that compose curriculum commonplaces (Schwab, 1973). It is these tensions that keep us aware, keep us changing and moving to a place of satisfaction. However I am not sure if a state of complete satisfaction can ever occur or if it should. Perhaps if we are not experiencing tensions then we are not aware and not learning.

I am aware of my tension and that I want more out of my students, more out of my classroom. I think my students learn an adequate amount of math, but is adequate sufficient. It is my feeling that students should attain mastery, feel good about themselves, learn more, and apply their learning in terms of projects where students have the ability to construct understanding and deepen their knowledge of the subject matter. My tensions along the way are; what does this look like? How is it achieved? How to get division support? How to get student support? How to get staff and administration support? How to get support of parents? There is a lot to consider when converting to a markless classroom, which does not seem like it at the start but there are tensions that surround mastery learning. And the major tension surrounding mastery learning is marks.

Learning and Assessment

Mastery Learning

Mastery learning was first introduced by Bloom in the 1960's (Bloom, 1968). It is based on the idea that "all children can learn when provided the conditions that are appropriate for their learning" (Guskey and Gates, 1986, p. 73). The general concept is to create an environment that

promotes understanding of mathematics. An offshoot of mastery learning is group mastery learning, where students first learn and understand the material through a group based problem solving approach. It is the melding of mastery learning and a constructivist teaching methodology that creates group mastery learning and allows student an increased understanding of mathematics. In this method the teacher plans a variety of problem solving activities that apply to the learning outcomes. A problem solving approach to mathematics education is important because “(1) it helps student understand that mathematics develop through a sense-making process, (2) it deepens students’ understanding of underlying mathematical ideas and methods, and (3) it engages students’ interests” (NCTM, 2003, p. 20). It has been shown that “mastery learning worked well in terms of promoting student learning ... [and] heightening their interest in and attitudes toward subject matter and their academic self-confidence” (Block, Eftim and Burns, 1989, p. 22). Not only did students learning and understanding improve with the mastery program but their overall attitude and identity towards mathematics and school in general improved.

The goal of mastery learning is to obtain an objective and once the objective is complete we move on. As a class we are not concerned about how quickly, how efficiently or to what degree the learning objective is completed, the goal is completion and therefore understanding. The degree of meeting the learning objective is not a concern because some students will achieve the objective while others will surpass the objective but it does not affect completion. As students are not given grades completion or surpass is irrelevant, the learning is the only goal. Some students will require adaptations to meet the goal and other will be pushed beyond the goal of the objective, but the students will all get what they need to be successful and this is the essence of fairness. In my sense fair is adjusting for each individual students for their needs. I

believe that this imbalance between fair and equal is at the root of what Clandinin et al (2010) refers to as “early school leavers”. It is my perception that the majority of the reasons these students left school early was due to the student being treated equal as opposed to fairly. These youth were not all the same and therefore needed to have adjustments made for the individual so that they could have been successful in school. Youth are complex individuals, just like adults, they have home lives, school, friends and their own identity that they are trying to form. As teachers we need to do our best to open those doors up for our students and treat them fairly so we can see our students writing their positive stories of school. Students need to be treated fairly and to shown that they are worth going the extra mile for.

In order for mastery leaning to be successful “teachers and students [need to be] partners in the assessment for learning process” (Stiggins, R., 2007p. 23). What Stiggins is referring to is that we (as teachers) need to work with students in tasks and assessments to discuss the goals, the outcomes and the indicators of understanding and achievements. When students are involved, it gives them power over their learning as well as their assessment. When students have power they are more willing to take risks, enjoy learning and become invested in the learning as a goal.

Alternative Forms of Assessment

We need to find methods to assess and provide feedback to the students regarding their attainment of the learning objectives. We know traditional classrooms with traditional assessments can critically shape students and their identity in a negative way (Boaler, 2000). Analogous to Vanessa’s story of her mark and how that defined her as a math student and a student who lacked effort. It was also a story of categorizing students based on their knowledge in the class. But most of all the mark was Vanessa’s cover story that she didn’t care about school or the math class. The problem lies is that Vanessa’s story was not a story of caring or

succeeding in school making this story a negative story to live by. Whereas students in reform classrooms, assessment is a means to build their sense of self and shape the way students come to understand who they are and beyond the classroom. (Boaler, 2000). Thus it is not only the way that we teach, but the way that we assess that affects students identities in mathematics and their sense of identity outside the classroom and as member of society in their use and application of math. There a variety of methods used: portfolios, project completion, interview, presentations, questioning, comment only marking of test, and self and peer assessments (Black & William, 2009).

The key to any method of assessment being used is that the feedback “needs to be clear, purposeful, meaningful and compatible with students’ prior knowledge and to provide logical connections” (Hattie & Timperley, 2007, p. 104). This means that the assessment needs to have purpose with any type of feedback that feedback needs to be immediate and compatible to the student’s understanding so that the student can move forward with their learning of their project and the objectives. Feedback is information provided from one individual to another regarding and individual’s performance or a task at hand. I am general in terms of the individuals, as feedback can be provided from the teacher, student, parent, administrator, peer or self as well the feedback can also be given to any of the listed individuals. Feedback is just a method of communicating how an individual is performing in relation to an intended goal or learning objective. Hattie and Timpereley (2007) also note that positive feedback, can keep the student’s interest in the activity, and they will have a greater positive sense of self relating to the subject matter and the project at hand.

Not only do assessments affect student identity, but that trickles into their lives as individuals in their family, with friends and community. To assume that assessment would not

affect all aspects of a individuals life is not realistic as children are not isolated individuals at school; their lives at schools affect the rest of their lives in their family, community and with their peers. Therefore how we assess and provide feedback must be well thought out in partnership with our students. When objectives are clear and goals are well determined, then students can achieve goals successfully and build a positive sense of self.

Identity

Student Identity

How to create or sustain interest in the classroom that will allow our students to meet their learning objectives? We need to examine new methods to create interest in our classroom. Zahorik (1996) discusses that there are key activities that have been reported to create interest in the classroom, the most common being hands on activities. It is important to remember that not all activities are created equal and that just because it is a hands-on-activities it does not mean that it is learning objective related or grade level related. For example I could have students physically counting all of the computations they are to perform in grade 10 math using two side counting coins, they are hands on but it is not a task that will enhance their learning or meet the required learning objectives, if anything the task is taking away from their learning.

Within activities we as the classroom community, students and teachers must have student trust and cooperation for learning to take place in a constructivist classroom. This cooperation and trust can be developed by the relationships between teachers and students as well as in the type of activity itself. It is creating activities or better yet having students help create the activities that are integral to their lives that build trust, cooperation as well as interest. We need to step back and remember that students need to construct their own knowledge and it

is our job as teachers to guide students and enrich their projects that meet their interest, practical and educational needs. If we can develop cooperation and trust with our students we can create a positive sense of identity for students in their story of school. It is the cooperative learning environment that has high ceilings in terms of learning, building relationships, developing trust, and building positive identities.

However, as teachers our ability to promote interest lies in our ability to enrich their program. Shulman (1986) states that it is our subject matter content that give us the range to enrich our students programs. What Shulman is saying is that those teachers with limited knowledge in mathematics will not be able to vary or create interesting programs for students, since they lack the ability and understanding of the content knowledge to create the valuable curriculum. I would say that content knowledge is a part of the ability to enrich students programs, but it is more than content knowledge. If it were not more than content knowledge then all mathematicians would make the best math teachers, and that is not the reality. According to Zahorik (1996), it is the teacher enthusiasm, the practical tasks, the variety of materials and activities, the relationship with the students, the personalized content, and group tasks that make curriculum making interesting for students and allow students to construct their own meaning of the learning objective that we want them to understand. There are a lot of variables involved when constructing understanding, it is not just the teacher and student, but with the increased knowledge and attention to the variables there is also increased potential in meeting and exceeding goals we have for learning.

Marks and a Child's Identity

The marking of a child seems to be a critical aspect of student learning, whereas I see it as an imposition and does not have a place in primary or secondary schools. I believe it is not our

job as teachers to grade our students; our job is to ensure that our students master or exceed the learning objectives that are outlined in the subject matter curriculum. Our job is to ensure that our students feel good about learning and become lifelong learners. It is our job to foster positive relations between teachers and students and between students. It is our job to help our students be successful in their lives. But it is not our job to grade our students with arbitrary marks that define their identity.

Dewey (1962) will go one further and state that marks not only define but harm students' identity. Marks were introduced in the past as a substitute for motivation; "to learn the lesson is more interesting than to take a scolding, be held up to ridicule, stay after school, received degrading low marks, or fail to be promoted". Thus marks were the motivator to have students be attentive and work hard in class – a way to avoid punishment. They have come into play in primary and secondary schools as a way to punish and maintain control. To see if this is true, if marks were removed would students stop working in class? I would assume in a traditional classroom the answer would be yes. So we must ask that is this our purpose for grades? Or is there another way to motivate and assess student learning at the same time. In a project based approach students are motivated for the pure idea that the learning is interesting, it impacts their life and they understand the knowledge that they are constructing. The assessment of what students have or have not attained can appear in many avenues; perhaps the completion or demonstration of a learning outcome in a portfolio, a project completion, an interview, a presentation, explanation to another individual, self-assessment, etc. But a grade is not required.

What is our purpose in grading? To articulate whether a student has completed the learning outcome, if so how does a 63% articulate the degree of completion or understanding of a learning outcome? Did they demonstrate 63% of the learning outcome? What does that look

like? Are you satisfied that they understand 63% of learning outcome? Should 63% be good enough to pass the grade and move on to more difficult learning outcomes? Does 63% represent all work that has been combined regarding the learning outcome or just a moment in time? When one thinks what does a 63% really mean to two different teachers? I would imagine there is a large discrepancy in terms of marking. If the discrepancies are large between teachers as subjective human beings then what is in a mark? And what does a 63% say about the individual receiving the mark? These are questions that are necessary for teachers to reflect on when assigning grades to individuals – because our students are more than just numbers. It is my hope that we can move away from penalizing students with poor grades or rewarding students with high grades as a method to sustain the student's interest with the assignment and to remember to try attaining the goal of a learning objective which can be met through feedback.

Constructing Understanding and Identity

What are the identities that are being formed in traditional math classrooms? In terms of mathematics, students have a sense of identity in terms of how they fit into the math classroom, their sense of achievement within the class and the behaviours of the class (Boaler, 2000). It is these aspects that can create a positive sense of identity in mathematics or a negative sense of identity in mathematics for students. In traditional mathematics classrooms Boaler (2000) reports that students tend to believe that mathematics consists of confusion, one right answer and a set of procedures to conform to. These are not attributes that I wish my students to associate with math or the school.

Through participating in a community of practice (mathematics) students come to learn mathematics and a sense of who they are as learners within the social practice of mathematics

(Boaler, 2000). Allowing students to inquire, discuss and explore mathematics towards a level of conceptual understanding. Creating students that can identify with math, enjoy math and create a positive sense of self within the math classroom.

Teacher's Identity

Professional identities or our identity as a teacher has many levels. Our professional identities are complex and are also our driving force for how we teach and how we learn. Our professional identities are those qualities that affect who we are as teachers; our content knowledge, our relationships with other teachers, students, and school, our lives as students and our personal lives. And it is these qualities that filter our knowledge and how we teach. As teachers “one of the primary responsibilities of teachers is to select and develop worthwhile tasks – tasks that are rich with mathematical possibility and opportunity and contain hooks that connect the child’s world with the practical mathematical idea and ways of thinking” (Perressini et al, 2004). Thus it is our job to use our professional identities to shape our students learning in a mathematical rich way and to provide our students with useful feedback that will allow them to sustain interest and meet their objective goal. As the child works with the problem and questions the idea it is the job of the teacher to work with the student to provide effective feedback to assist the student in developing mathematical meaning. It is our professional identity that shapes the ways in which a teacher frames and addresses problems of practice it is our lens through which teaching and learning is analyzed, understood and experienced. Thus it is the lead of the student but it is the relationship between teacher and child that frames the understanding of the mathematics. The trust that is formed and the cooperation from both parties create the understanding and the construction of the mathematical knowledge through the eyes of the student.

Throughout our day and years of teaching we are constantly being challenged by students, teachers, parents, administrators and superintendents. It is the juggling of these tensions and the continuous creation and recreation of their professional identities that moves us forward as teachers (Perressini et al, 2004). This juggling moves us to a deeper state of inquiry, with our students, as we challenge ourselves and our students in a quest for constructing knowledge.

Conclusion

At the end of the journey, I am unsure if I have resolved any tensions nor I am sure if they can ever be solved. There is more direction in terms of where I want to proceed in both my learning and my teaching. In my further research I would like to take from Cook-Sather (2002) that we need to listen to students and engage in conversations with our students as to their learning. It is the “students have a unique perspective on what happens in school and classrooms and on the dynamics between their schools and their communities that inform what happens in those schools and classrooms” (p. 3). Through looking through the eyes of our students we can begin to look through the window into their lives and examine a small portion of their identities. Cook-Sather (2002) goes on to say that it is “a fundamental shift of all the dominated epistemology in our society and our schools to one based on trusting, listening to, and respecting the minds of all participants in school” (p. 10). This does not just mean our students, but the support staff, community members, families, etc. These members of our extended family of our school landscape have insightful knowledge to offer regarding our students, the school community, and our student’s identities. With the knowledge we gain through their feedback we can begin to move forward to altering the environment that meets the needs of all the individuals in the school best.

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