Foundational Beliefs and An Evidence Informed Recipe for Personalized Learning

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It is important that schools begin to create new cultures for teaching and learning. We have a moral imperative to evolve American education, as both qualitative and quantitative data indicate that the current and traditional models and beliefs are perpetuating generations of Americans that are not adequately prepared for the work force or to seek higher education. They are not efficiently and meaningfully contributing to societal and economic and democratic growth. Where do we start? How do we do this? This article attempts to answer these two questions by suggesting a starting point and then providing an evidence informed recipe based on research and implementation of such practices and beliefs in several schools.

Eliciting and creating a shared purpose that is informed by and resonates with all stakeholders, is the necessary starting point in shaping and cultivating common beliefs about teaching and learning. The goal of education is to create one school system that meets the social, emotional and academic needs of all children. To achieve this, the system must not have gaps. There must be tiered systems of resources for teachers and tiered systems of support for students in place (National SWIFT Center). And as learning does not stop after 180 days which is the typical length (NCEE, 2019) of an American public school year, we must address summer programming. Lev Vygotsky (1978) documented that there is a particular student social grouping method that maximizes the human growth potential of children because it is strength based, and conceptual development based. This is the Zone of Proximal Development.

Jean Piaget (1952) shows us that within the four conceptual development levels there is a particular teaching method that meets students where they are developmentally and conceptually, and supports and promotes conceptual growth at the appropriate pace for any given child. These three methods are concrete to pictorial to abstract. We know from Carol Dweck (2007, 2012) that having a growth mindset opens the doors for growth and that this act is perpetual and self serving, meaning that the more you use it the more it grows.

John Dewey, David Sobel, and John Holt remind us that, "learning is not the product of teaching, but the product of the activity of learners" (Holt, 1967). Within these mixed age and strength based groups, students are most engaged and demonstrate with more clarity and accuracy what they know and can do. Jim Knight (2007) John Hattie (2012) and Robert Marzano (2007) have documented that by increasing a teacher or teachers' ability to engage each other in instructional peer coaching (collective efficacy) of high impact, evidence based instructional strategies, they are more prepared to differentiate to meet the varying needs of a wider range of learners. The National Center for Co-teaching at St. Cloud University offers clear evidence that if teachers and or the school system can support teacher efficacy in co-teaching systems and structures, then the human capacity in your system to be reliable OER's (open educational resources) increases. Ronald Edmonds posed a question that challenges complacency anywhere in our educational system. The content of his question pushes us to have a Frierian formed dialogue which has the ability to move a society, however big or small, poor or wealthy, etc., forward. "We can...successfully teach all children whose schooling is of interest to us; we already know more than we need to do that; whether or not we do it must finally depend on how we feel about the fact that we haven't so far" (Edmonds, 1979).

The starting point to achieving these goals is dialogue, but specifically, dialogue framed and informed by growth mindset practices and grounded in adult learning theory and implementation science. A school system must have equity and agency in regard to resources for teachers and parents, and supports for students. A school system must have competencies broken down into vertically aligned learning progressions. There must be a rich culture of experiential, problem based and project based learning opportunities that provide entries for multiple modalities and provide multiple opportunities for students to demonstrate growth over time.

Collective teacher efficacy must be supported in the areas of co-teaching and high impact evidence based strategies where isolation is an unknown and human and other tangible OER's is commonplace. Student groups must be strength based, not age based, and these grouping must be flexible and have the ability to shift students as a result of growth.

The larger system must not subscribe to passing students based on chronology or seat time. Instead, the larger system must be grounded in the belief and practice that all children are in one system for 13 years (pk-12). The results of these evidence based practices is perpetual growth, confidence, achievement and stewardship where all students are independent and active contributors to their community. As a result, American public school education can fulfill its original purpose, which is economic growth, sustainability and independence.

North Charlestown Community School and Charlestown Middle School are both evolving toward this vision. However, one cannot lead them where they don't want to go. At this time there are pockets of interest and commitment which is being used as a lever for transformation. NCCS's onramp for personalized, multi age, competency based teaching and learning was identifying and or creating common planning time and schedule adjustment. This was only realized after the implementation of adult learning theory informed dialogue focusing on problems of practice. As a result, collective efficacy was achieved in the following areas for year one: additional common planning time for co-teachers to collaborate on mixed age strength based and competency based and project based learning opportunities. Rubric development for competencies are being developed and sharpened with student work samples. Each teacher has created their own way to make learning visible for their students. As a result, iReady scores show that all students are making growth and that some students are making growth toward their stretch growth targets. we have also observed students' confidence in the subject area starting to increase. We have seen increased engagement and participation from the students when in this non graded "by age" and non graded "by letter grades" or NG2 system (Earick, 2017). NCCS attended the 2018 Plymouth State University (PSU) Problems of Practice Summer Summit to explore how a NG2 system could support our larger vision for personalized multiage, competency based teaching and learning

Charlestown Middle School's onramp for personalized, multiage, competency based teaching and learning was made possible through the collective efficacy in the area of instructional peer coaching of high impact, evidence based, instructional strategies. This included the creation of play books that contain the checklists for the implementation of such engagement and instructional strategies. CMS sent teacher and leadership representation to the New England League of Middle School's Annual Conference where they presented their onramp and evolution. As a result, teachers have expressed they feel they are leading the school and that they feel more professional. Faculty are creating checklists resulting from the study of high impact evidence based instructional strategies. These strategies are being implemented with great intention in the classroom, resulting in higher levels of student engagement. This has been confirmed by increased formative assessments scores and teacher observation.

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