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Building a Culture of Formative Assessment Through Professional Development

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Introduction

Research has shown that formative assessment is a powerful tool for moving student learning forward. The core challenge is: How do we move a school district to a place where everyone in the organization has an understanding of the tenants of formative assessment and is willing to embrace these principles in their own work? The approach described here lies in developing a culture of formative assessment through a coordinated, collaborative and comprehensive process of professional development where education partners work towards a common goal of improved student learning and see themselves as having a role in achieving this goal. We describe the design and development of such an approach, and illustrate it with a case study of its implementation.

Strategic Design

The many studies of formative assessment for learning, summarized in the research review of Black and Wiliam (Black & Wiliam 1998; Wiliam, 2011), have shown its power in enhancing student learning – if and only if it is done well. Other research since then has confirmed this potential.

> *"Used with skill, assessment can motivate the unmotivated, restore the desire to learn, and encourage students to keep learning, and it can actually create – not simply measure – increased achievement".*

However, to do it well involves profound changes in the professional practice of teachers. Enabling established professionals to successfully change their well-grooved day-by-day practice is a formidable challenge –for them and for the school system they serve.

Here we describe and analyse an approach based on focused professional development (PD), not only of classroom teachers but of other professionals at all levels in the school system whose support is needed to make this possible.

There are seven design principles for successful implementation of this process. These elements are described below and, further, in *A Guide to Support Implementation: Essential Conditions* (Alberta Education, September, 2010) and are based on collaborative implementation planning by educational leaders at all levels across the school district.

1. Shared vision: stakeholders share an understanding of and commitment to the implementation of formative assessment across the district.
2. Leadership: leaders at all levels provide the leadership that moves the organization towards its goal.
3. Research and evidence: implementation decisions *must* be based on current research as well as recent district and school data.
4. Resources: successful implementation depends upon having sufficient human resources, materials, and funding.
5. Teacher professional growth: ongoing PD is provided to enhance teachers' understanding of formative assessment processes.
6. Time: successful implementation and sustained change take time.
7. Community engagement: parents, school councils, students, and other community members *must* be included in developing the vision and plans for its implementation.

To exemplify these principles in action, we outline the process as used by a school district in Virginia, which shows how PD can be designed to address these design principles in building a culture of embedded formative assessment across a school jurisdiction.

Design principles and their implementation

These design principles for implementation have been used as a framework for implementation in many projects across Alberta. They form the basis of the work carried out by the Edmonton Regional Learning Consortia and Alberta Education. However, here we share the case study of a Virginia school district that used these design principles to implement a culture of formative assessment across the district.

1. Shared Vision

Systemic change doesn't just *happen*. It occurs as the result of a vision that is articulated to the leaders and stakeholders of the organization. Part of having a vision is having a plan to achieve it. In this, the school district needed to develop a shared understanding of, and a commitment to, the implementation of

formative assessment across the district. Each stakeholder had to see not only the value of formative assessment but also their respective roles and responsibilities in supporting the implementation of this change. Leaders need to be honest about their current reality, consider that reality in the context of the desired vision, and identify strategies and processes that would help the organization move towards its goal of having every teacher use formative assessment processes to inform instruction.

It is essential that stakeholders are involved in the development of the shared vision and have a sense of ownership for its success. The vision must be based on current research as well as the needs and priorities of the district. In planning for this work, leaders not only plan to collaboratively develop a vision but also decide what evidence will be used to demonstrate the vision is being implemented, what processes will be used for ongoing review and revision of the vision and how the vision will be communicated with stakeholders.

For the Virginia school district, the process began with a vision of improving student achievement through the use of formative assessment. In order for that vision to grow, colleagues had to understand the tenants of formative assessment, have a sense of what it would look like in the classroom, and believe in the power of formative assessment to positively impact student learning. The initial work through a book study provided the framework for conversations from which the vision grew to become a district-wide goal. District-level instructional supervisors, lead by the Director of Instruction, engaged in a study of Dylan Wiliam's *Embedded Formative Assessment* (Wiliam 2011). This group of district-level instructional leaders met weekly from April through June, and semi-weekly from June through August to discuss the concepts and solidify their understanding of formative assessment. One important aspect of the discussion was the formulation of a common definition of formative assessment and what it looks like in action. This was accomplished through guided questions and open, honest conversation (described in detail in section 1.2, Leadership).

Challenges and Responses

Establishing a shared vision required the re-thinking of a paradigm. The concept of formative assessment is frequently thought of as an instrument. Breaking through this barrier with district-level instructional staff was not easy. The team had to confront their pre-conceived notions of formative assessment as an "event"—a test given to determine progress at a specific interval—and instead consider that formative assessment should happen each day through observation, intentional student discourse and brief written reflections. Because mutual trust and respect were well established, the group felt comfortable sharing opposing viewpoints, questioning the validity of the research, and engaging in "point-counterpoint" conversations.

This establishment of mutual trust is a vital step in the process of changing norms and crusading for systemic change. Tuckman's (1965) model of team formation acknowledges through the process of transforming from a group of individuals to a team with a common purpose, members progress through stages, including forming, storming, norming, and performing. When forming, team members are cordial as they get to know one another and understand the work of the team. The next phase, storming, is when the team as a whole is most vulnerable. Members may question the purpose of the work, the leadership of the team, and the approach taken by other team members. Through careful leadership, a team can move beyond storming to norming. During the norming stage, members resolve their differences, begin to respect the leadership, and recognize the value and purpose of the work being done. Finally, the team is performing, when members come together as a true team and work to achieve the goals. Members of the team were tentative and cordial initially, but then engaged in emphatic discussion with regard to their position on the topic. They questioned the leader when their thinking was challenged, but because respectful relationships had previously been established, they worked through differences and began accepting different perspectives. Participants needed to be heard and be comfortable in sharing their ideas, presenting their perspective, and conceding their previously-held beliefs. Although Tuckman's work applies to new teams, applying the team formation concept with an established team who, because they were embarking on an unfamiliar concept and did not have a common understanding of that concept, was critical to achieving the vision.

2. Leadership

In planning PD for leaders it is important that a plan exists for developing leadership capacity among leaders at a variety of levels including, but not limited to, central office staff, principals, assistant principals, teacher leaders. For this district, the process of developing the leadership capacity of district leaders started with central office consultants whose role it was to provide PD to teachers, teacher leaders, and principals. As mentioned previously, PD began with a book study on the topic of formative assessment. The team worked through *Embedded Formative Assessment* (Wiliam 2011), using intentional and targeted questioning. Through discussion – which was often spirited but always respectful – they reached consensus on what the concepts mean and, just as important, where each school was relative the concepts. These are essential first steps.

Once the initial instructional leadership team was committed, the PD moved simultaneously up and down the leadership continuum. Conversations with district-level executive staff that helped them gain an understanding of both the concepts and the value of utilizing formative assessment were essential.

Executive staff played a key role in supporting the message as well as articulating it themselves. Principals took their cue from the superintendent. For that reason, they needed to know that this initiative was supported by him, but they also had to hear him advocate for it.

PD for principals and other building-level leadership was less direct. Through semi-monthly instructional focus meetings, district leaders provided PD first to principals and ultimately to assistant principals and teacher leaders.The approach was systematic and intentional. These meetings, historically held in the district's central office, were moved to schools. The initial subtle references to the concept of formative assessment not as an event or "test" but rather as an ongoing process as described by Wiliam (2011), and as agreed upon by district-level instructional staff. These references created interest, curiosity, and the desire to learn more. Additional discussion of the concept with direct instruction and theoretical application activities in the form of videos for principals deepened their understanding, but more was needed. By moving instructional focus meetings to the schools, classrooms became application labs for principals. Classroom walkthroughs became part of the scheduled meeting time. These brief, 8-10 minute classroom visits involved small teams of principals, assistant principals, and central office leadership visiting classrooms looking for evidence of, or missed opportunities for, formative assessment. Observers of 4-5 leaders spent their classroom time observing the actions of the teacher and students—including the teacher's informal assessment of student learning and students' self-evaluation, if present; reviewing the materials and resources students were using; and talking with students about the lesson's objective and the students' level of understanding of the concept. The subsequent discussions that transpired served to further deepen the understanding of formative assessment and helped develop a common language and focus for what formative assessment looks like in the classroom. Three years into this project, classroom walkthroughs with small leadership teams has not only become the norm, but are often central to instructional focus meetings.

Planned, structured opportunities for collaboration among school and district leadership were provided to help further develop leadership capacity. As is often the case, school leaders as well as district leaders had varying degrees of understanding of and commitment to the concept. District instructional staff was able to work through the misconceptions and resistance by some using a similar approach to that used to establish the vision initially. Allowing principals to engage in that same open, honest dialog that instructional supervisors did in establishing the vision and applying Tuckman's model enabled principals to gain a clearer understanding of formative assessment and its role in moving student learning forward.

Providing intentional and meaningful collaborative experiences enabled leaders to learn from one another and share ideas, thereby strengthening the leadership team and opening the door to additional collaboration and sharing opportunities. This was a critical aspect of the project. Prior to restructuring learning opportunities for leaders in this way, competition, rather than collaboration, was the norm.

As the PD continued and the concept of formative assessment began to take hold in classrooms, the district had to change policy and regulation to reflect practice. An archaic assessment policy aimed primarily at summative opportunities for students, and with a focus on mechanisms and structures such as grade weighting and frequency of assessments, was updated to focus more on assessment as a measure of student learning and determinant of the current learning needs of students. Required quarterly assessments that were summative in nature were replaced with more frequent benchmarking that is formative, ungraded, and serves to inform all stakeholders — the teacher, the student, the parent, and the school and district leadership—where individual and groups of students are in their learning of a concept. Summative assessment is an important aspect of determining student learning, but as teachers shifted from assessments that marked the end of learning to ongoing assessments that indicated the need for targeted intervention and/or enrichment during the learning process, the mechanical aspect of the process—grade weighting and frequency—became secondary. This shift was reflected in the new policy and regulation, bringing in the final level of district leadership: the school board.

In order to ensure that leaders at all levels have the capacity to champion for the use of formative assessment, it is important to consider what leadership decisions are required to support implementation, how leaders will sustain implementation, and how PD for leaders will support their on-going growth in the area of formative assessment. A mechanism for collaboration among current and future leaders, such as the instructional focus meetings used in this district, is important in supporting and sustaining implementation.

Challenges and Responses

Shifting the principals' focus from management to instructional leadership added a layer of complexity to the process of moving towards the systemic use of formative assessment. While a foundation had been established through prior years' focus on teaching and learning, principals saw their lack of expertise in some content areas as a barrier to progress. How can a principal who had taught history provide meaningful feedback on the use of formative assessment in an Advanced Placement chemistry class? The solution was two-pronged. First, instructional supervisors in this district were assigned to content areas based on their training. This allowed them to provide support to the principals with regard to specific strategies for a given subject area. Having this support from content-

specific instructional supervisors freed the principals to focus on the instructional practice and processes, rather than the content. Secondly, late in this process the district began including teacher leaders in instructional focus meetings. Involving one teacher leader per content area, per building, further established the common vision and consistent language with regard to the process of formative assessment. By bringing classroom teachers who were regarded or identified as leaders into the fold, a consistent message was provided to teachers from both principal and peers. The teacher leaders were also able to provide the subject-specific support to principals when district-level instructional supervisors were unavailable. In hindsight, the addition of teacher leaders in the instructional focus meetings was a crucial element that should have been added sooner.

3. Research and Evidence

It is important for all stakeholders to be well informed about the research surrounding formative assessment and the positive effect it can have on student learning. It is equally important for stakeholders to have a realistic idea of where the district is in terms of student success and to use this data to create targets for improvement. Part of the PD should focus on the effective use of data to support student improvement.

As the district moved forward, the focus on research-based practice strengthened. Through instructional focus meetings as well as PD offered to all licensed staff the research of Hattie (2012) was introduced as a way of increasing the understanding of the need for, and importance of, formative assessment and descriptive feedback to move learning forward. Discussions and activities enabled teachers and leaders to understand the research behind the concept. Discussion focused on those strategies and practices that are deemed highly effective, such as self-monitoring, response to intervention, formative assessment (Hattie, 2012). Practices assumed to be effective but shown through research to be less effective, such as class size, motivation, teacher subject matter knowledge, and team teaching (Hattie, 2012) were also addressed. Over time, and with a focus on context, a more thorough understanding of these concepts emerged and a change of practice began to take shape in classrooms.

At the end of the second year, Dylan Wiliam was brought in for PD session for district, school, and select teacher leaders. This day-long session demonstrated a strengthened commitment to implementing formative assessment while also serving to provide yet another, deeper layer of understanding of the concept and the research behind it. Following this session, many school leaders led a book study of *Embedded Formative Assessment* with their leadership teams and, ultimately, their school staff.

In the third year of the initiative, application of the concept broadened beyond the classroom. At this point, systemic transformation was emerging. Discussion

of formative assessment applied to classroom, school, and district-level data was initiated. At the classroom level, teachers used whole-group data to determine the effectiveness of this approach over time, rather than waiting to evaluate the effectiveness at the end of implementation. Similarly, school leaders were coached to use formative assessment to determine the effectiveness of school improvement efforts. Through PD that utilized application activities, principals and assistant principals began gathering data throughout implementation, with ongoing measurements to determine the effectiveness of improvement efforts. While still in its inception, this approach is providing opportunities for open, honest discussion among principals at each level. The district holds quarterly progress monitoring meetings with school leaders in which they discuss initiatives and the data associated with them. Because a trustful relationship has been forged through collaboration opportunities in instructional focus meetings, principals feel comfortable seeking feedback and answering questions from their colleagues as well as district leadership teams.

It is important to decide what research will be used to inform planning and how this research will be shared with all stakeholders. It is also important to plan how district data can be used effectively to support implementation. PD around the analysis of data may need to be part of plans, as "effective assessment is grounded in the ongoing retrieval and analysis of information about the quality and quantity of student learning" (NCSM, 2008, p 46)

Challenges and Responses

Applying the concept of formative assessment to school improvement is an ongoing process. The quarterly progress meetings held to determine the effectiveness of initiatives were not as valuable as they could be. Principals came to district offices and presented their data to the district-level improvement team that consisted of directors and instructional supervisors. This approach created an "us/them" feel and put principals on the defensive. Now small teams (of no more than seven) visit schools for the quarterly updates. Data are presented in context—i.e., classroom walkthroughs showing implementation of instructional improvement initiatives, videos of teacher teams engaging in collaborative planning, Response to Intervention teams working collaboratively to problem-solve student concerns, and other contextual opportunities for the principal to showcase initiatives in action or present ongoing challenges for feedback and support. While this approach has not yet been implemented, the response to the plan by district level instructional leaders and principals has been favourable.

4. Resources

In planning for implementation of formative assessment practices across a district, it is important to consider not just immediate needs but also mid and long-term resource needs to ensure sustainable change. District leaders made a decision to train all licensed staff on formative assessment and how to effectively implement it in the classroom. This decision presented logistical challenges. How does a district with 1200 licensed staff members afford PD for everyone? When can the PD occur? Finally, with whom does one start?

Taking a pragmatic approach, leadership determined PD would occur over a three-year period. Teachers would participate in an initial one-day training session, requiring the district to pay for substitute teachers for participating teachers. In determining who to train first, the most logical approach seemed to be to select those teachers who were to be evaluated the following year. Because formative assessment strategies were an expectation of a new teacher evaluation system, training teachers in the concepts and approach the year prior to their evaluation made sense from a practical standpoint as well as a professional growth perspective. All licensed staff members were trained after three years. Ongoing training of new staff is provided during a New Teacher Orientation day prior to the start of each school year. Because district instructional supervisors conduct the PD there is no cost to the district moving forward.

The cost of bringing an internationally-recognized speaker such as Dylan Wiliam to address the leadership team was significant. However, due to strong partnerships with neighbouring districts, the cost was mitigated by inviting leaders from other districts to participate. This not only reduced the cost and enabled districts to experience a speaker of Dr.Wiliam's calibre, but also provided an opportunity for districts in the region to hear the same message, making shared understanding and a more consistent application of formative assessment more likely. School districts in the region are in varying stages of implementation of the concepts of formative assessment. Much of that variation is attributable to differences in school communities, including district sizes and level of community support. Even so, districts in the region are moving forward with implementation of formative assessment as a means of improving student learning. This was an important, yet unintended, outcome of the effort to share resources across the region.

Prioritizing resources to support the vision of a system change is vital. This is made much easier if the vision has been developed collaboratively with input from all stakeholders.

Challenges and Responses

As is often the case, cost and time have been challenges. In looking at the cost of training all 1200 licensed staff and bringing in Dr. Wiliam, the district had to determine priorities and decide to fund what they valued. Paying for the cost of substitute teachers as well as consultants to provide the PD meant sacrificing other PD and curriculum work. Because the vision was in place and the importance of formative assessment was recognized, those decisions were relatively easy ones. The difficult work—going through the visioning process and overcoming push-back—allowed for funding discussions to be part of the process of executing the plan.

5. Teacher Professional Growth

It is often thought that providing PD to classroom teachers is the only way to bring about change in teaching practice. Although continuous learning opportunities for teachers is vital if a district wants every teacher to use formative assessment processes to inform teacher practice and improve student learning, it is equally important that teachers have access to a variety of learning opportunities that support their needs. Support for teacher growth must be coordinated, collaborative and comprehensive and should come from a variety of sources such as effective mentorship and coaching opportunities. The use of self-assessment is also important and should be nurtured. The recently updated teacher evaluation system provided opportunities for teachers to reflect on their daily and overall practice and contemplate the effectiveness of their approach. This reflective practice encourages professional growth by virtue of being reflective. While not all teachers are at the same level of reflective practice, this is a key component of ongoing professional growth that is kept in the forefront through discussions between teachers and instructional supervisors or principals.

Every licensed staff member in the district participated in PD on formative assessment. Classroom teachers, counselors, librarians, and instructional and technology coaches learned the tenets and value of formative assessment. It was important to include all staff, and not just core classroom teachers. Because the vision was one of systemic transformation, everyone had to have a common experience and understanding of the concept. However, the one-day session was just the beginning.

Because the concept of formative assessment is integral in the recently-updated teacher evaluation system, professional learning was ongoing and designed to scaffold on each learning experience. Once teachers participated in the one-day PD, they were engaged in embedded PD experiences in varying degrees based on their readiness. For example, some teachers worked with instructional coaches while others participated in professional learning communities (PLC) that engaged in ongoing discussions around formative assessment. Formal PLCs

continue to grow at the elementary level, with time set aside once per week for such professional conversation. Middle schools have daily PLC time and district or school leaders join the discussions one or two times per week. High school collaborative planning is more difficult to achieve, so discussions with instructional coaches occur in a less structured/planned manner and less frequently. Some high school teachers participated in lesson study using the Japanese model in which they teach before a small group of observers, and discuss with questioning and feedback from the observers.

At the same time as teachers were learning how to integrate formative assessment and descriptive feedback in their classrooms, they were also engaged in self-reflection and receiving formative feedback on their own professional practice. Principals and district-level instructional coaches conducted walkthroughs and provided immediate feedback to teachers by using a digital platform to gather, organize, and disseminate the data quickly (in this case, Google Forms). Instructional leaders were formatively assessing teachers in much the same way that teachers were formatively assessing students (though with less frequency). Coaching was provided to improve practice based on the data collected through the walkthrough process.

Additionally, as part of the teacher evaluation system, teachers engaged in goal-setting and data collection to determine the effectiveness of the goal. Data may include running records of informal observation of student learning by the teacher, student work samples, formative benchmarking, or summative assessments. Using the concepts inherent in formative assessment, teachers analysed the data throughout the process to determine the effectiveness of an initiative they were implementing, and made adjustments as needed.

This approach to professional learning for teachers serves multiple purposes. First, by actually engaging in self-assessment and benchmarking to determine the effectiveness of their own goals, teacher understanding and appreciation for the concept of self-monitoring is strengthened. Rather than being a passive receiver of new information, teachers are actively engaging in the process themselves, thereby gaining a stronger ability to coach students to do the same.

While nearly all teachers are engaging in the process of changing their practice as a result of this initiative, they are at varying levels of success and comfort with formative assessment application. However, classroom observations reveal an increasing level of intentional opportunities for formative assessment during instruction, and teachers are talking about formative assessment differently than they were prior to the staff-wide PD and the systems approach to implementation. Examples include a primary-grades teacher of English language learners who provides a chart for students to monitor and track their own progress; a math teacher who teaches her students the concept of formative

assessment and then has them engage in the process themselves; many teachers who provide opportunities for students to participate in Think-Pair-Share activities or reflective writing for the purpose of making their thinking visible, thereby giving the teacher the opportunity to circulate and gauge student understanding of the concepts being taught. Exit tickets are more the norm than exception, and many teachers are using them to make adjustments to their lesson plans in order to provide either extension or intervention opportunities for students.

By implementing a formative approach to teacher evaluation, in the form of walkthroughs and descriptive feedback, teachers are again active participants in the process of formative assessment. However, the value of this process also serves to improve instructional leadership. By increasing time in classrooms, participating in walkthroughs with district-level instructional staff, and engaging in collaborative discussion with colleagues following leadership team walkthroughs, the district is building instructional leadership capacity in principals and assistant principals. With the recent addition of department chairs in instructional focus meetings, the district is not only expanding that capacity-building to teacher leaders, but also better preparing them for expanded leadership roles.

Rich professional learning experiences will influence teacher practice. The hardest aspect of formative assessment is translating the principles of formative assessment into real changes in curriculum, instruction, and learning opportunities. For this to happen, coordinated, collaborative, and comprehensive professional learning plans must be in place that provide on-going support for teacher growth around good assessment practices.

Challenges and Responses

The greatest challenge to teacher professional growth was teacher stress. The coaching that occurred through this process often focused on applying the concept of formative assessment in the place of, rather than in addition to, other teaching practices. Implementation is far from complete even after over three years of working towards it. Overcoming the idea of "one more thing added to my responsibilities" is difficult, and requires time, patience, and support. As teachers recognize that formative assessment can and should alter how they teach, rather being something separate or in addition to teaching, more implementation is evident. Instructional leaders at both the district and school level have a clear understanding of the principles of formative assessment and are able to provide feedback to teachers as they plan, and not just as they teach. Helping teachers think through strategies and explicitly consider which methods will get results encourages teachers to thoughtfully consider the needs of all students, the nature of the concept being taught, and the opportunities to formatively assess along the way.

6. Time

Part of the process of implementing a change must include strategies that ensure each stakeholder group has the time they need to successfully implement and sustain the change (Alberta Education, 2010). It is important that a plan for PD include short, mid, and long-term strategies. Time for both formal and informal learning and collaboration must be provided. Timelines set for implementation may need to be revisited as the implementation plan rolls out.

Once there was a vision for systemic transformation, there had to be an acknowledgement that such change takes time. By having a PD plan that focused on short term and long term goals, district leadership was demonstrating an understanding that to create sustainable change, an intentional and tactical approach must be followed. Starting with formative assessment as classroom practice was the first step. Shifting beyond the classroom to the bigger picture of school improvement and, ultimately, district improvement, has been a much more challenging process. However, with each new experience, opportunities exist to further develop staff's understanding of the concepts and move the district closer to its vision.

Challenges and Responses

As noted in section 1.4 (Resources), costs associated with this initiative were significant. Over the course of three years, the district spent approximately $200,000 to pay for substitute teachers and consultants to provide the training. The decision to bear this cost came with an acknowledgement that other PD and curriculum work would need to be scaled back or eliminated. This was part of the prioritization process and had to be an accepted result of the vision. With the expense of initial training completed, the district is using instructional supervisors and directors to provide the ongoing support to principals and teachers. The role of district-level leaders has shifted from resource provider to instructional coach. This has been a positive change that allows for rich, more personalized and dynamic conversation with teachers and school leaders.

7. Community Engagement

Systemic transformation is incomplete without consideration of the community. While some efforts are underway, the district is in the very early stages of community engagement. Schools have approached this aspect based on the uniqueness of their school communities. Some have held parent learning sessions that focus on school and district initiatives. These sessions, implemented conference-style with break-out sessions, have provided opportunities to educate parents on changes in assessment and grading practices in a forum that allows for question and answer sessions with school and district-level leadership. Others have initiated discussion through parent councils, and still others invite parents in for "back to school" nights in which teachers themselves expose parents to the

concepts. In all cases, there is more work to do, and a continued education campaign is a must for parents if this effort is to be successful.

As with schools' approach to educating parents, informing students has been varied as well. Some teachers have explicitly shared their plans with students. Others have quietly begun the change in classroom practice without drawing attention to the difference. This is a process that begs for further development and more careful planning.

Finally, the school board has been introduced to this concept through changes in policy and regulation. By way of update, a school board retreat was held that focused exclusively on instructional practice. During this retreat, district leadership engaged board members in dialog concerning the district's stance relative to the initiative, and shared examples through video and experiential application of how the concept looks in daily practice.

Planning for a systematic move towards formative assessment must be inclusive of the broader education community to include internal and external publics. It is only through developing an understanding of formative assessment and its potential to positively impact student learning that parents, students, board members and other stakeholders can support implementation.

Challenges and Responses

A challenge to engaging the community in this discussion is the level of understanding and interest in school-wide or district-wide instructional approaches. Parents in particular tend to be more interested in what is happening in their own child's classroom and less interested in large-scale initiatives. The more comfortable principals and teachers become with this concept, the more personalized the conversation will be with parents. However, a more explicit plan to involve the community early in the process may have helped those later conversations with teachers. Involvement of the community has admittedly been less intentional, thereby creating less support and more need for community education than may have otherwise been necessary.

Lessons learned

The implementation of this approach to establishing formative assessment and the systemic transformation is ongoing. In reflection, there are elements to the approach that have been more effective than others.

Beginning with district leadership and creating a shared vision at the district level was fundamental to this design and has enabled the district to move forward with its plans. By establishing a shared vision and ensuring a common language and understanding of the concept, the Virginia district took steps towards ensuring consistent implementation throughout each department and at each level.

Having executive staff support the effort and communicate the expectation to principals, assistant principals, and teachers lent a level of importance and credibility to the process in the eyes of those most responsible for implementing formative assessment that it may have otherwise lacked.

Planning simultaneous PD, with leadership being a small step ahead of teachers, allowed for a support system to be established as new instructional practices were applied. Teachers had to have the confidence that they could take risks and try implementing these strategies without the fear of principals (i.e. their evaluators) not understanding or supporting their efforts. In retrospect, an earlier start for principals may have been more effective to ensure that highly effective or motivated teachers didn't get ahead of the principals.

Executing the implementation first at the classroom level (teachers formatively assessing students) and then at the teacher, school, and district level (using walkthroughs as a means to formatively assess teacher practice, and using data and processes to formatively assess school-wide and district-wide initiatives) allowed for a deeper understanding along a continuum of learning and application. With each new layer of implementation, all staff gained a different perspective of the construct, which stretched their learning and strengthened implementation at the step before. It was this systematic approach that has likely enabled the district to move forward at a rate not anticipated at the start of implementation.

Engaging the community is an area for growth. As intentional as the district was in training leadership and teachers, educating the community—including students—in the process has been far less intentional and, as a result, less effective. Just as principals had advance training experiences before teachers were brought into the process, a planned "trickle down" approach should have been taken with parents and students. Schools and teachers should implement learning sessions for parents that are consistent with a district-wide plan. As the district engages in its own formative assessment of this initiative, transparency dictates that the results be communicated openly and honestly with the school community. While there have been many successes on this journey, there have also been opportunities for growth as well.

Through well-planned PD for all stakeholders in the school district, the vision of one instructional leader led to the successful implementation of formative assessment processes across the district. This vision was realized by creating a culture of learning in which all members shared the responsibility of supporting implementation. We believe it is central to this design.

The seven design principles described in this paper were intentionally and strategically applied to the process to achieve a culture of formative assessment across the district. These design principles were integrated to form an

implementation plan that reflected the specific needs of the district. It is essential that all the design principals are addressed in an implementation plan. This is a messy process, with blurred lines between and among the seven principles. It is the interrelated nature of these design principles that brings about desired change. Each is essential to achieving the desired vision, and strategic application of the principles is crucial to the success of the process.

References

Black, P., & Wiliam, D. (1998). *Inside the black box : raising standards through classroom assessment.* London: King's College London School of Education 1998.

Alberta's Education Partners (2010). *A Guide to Support Implementation: Essential Conditions.* Edmonton, AB. ISBN 978-0-9866332-0-1. Available at http://www.essentialconditions.ca.

Hattie, John. (2012) *Visible Learning for Teachers.* Routledge. New York, NY. 2012.

National Council of Supervisor of Mathematics (NCSM) (2008). *The Prime Leadership Framework.* Solution Tree. Denver, CO. See http://www.mathedleadership.org/resources/summary.html.

Tuckman, B. (1965). *Developmental sequence in small groups.* Psychological Bulletin, 63, 384-399. doi:10.1037/h0022100

Wiliam, D. (2011). Embedded formative assessment. Bloomington, IN.

Popham, J. (2008). Transformative Assessment. ASCD. Alexandria, VA.

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Dr. James Angelo James Angelo has worked 22 years in public education as a teacher, principal, and director of instruction, and is currently assistant superintendent for instruction with Frederick County Public Schools in Winchester, Virginia. In addition to his work in public education, he has been an adjunct instructor at the university level, teaching education and leadership courses. He earned his Bachelor of Science degree in Secondary Education/English from Edinboro University of Pennsylvania, a Master of Education degree in Education Leadership from George Mason University in Virginia, and a Doctorate in Education from The George Washington University in Washington, D.C.