

# System leaders using assessment for learning as both the change and the change process: developing theory from practice

DOI: 10.1080/09585176.2014.964276

Anne Davies<sup>a\*</sup>, Kathy Busick<sup>b</sup>, Sandra Herbst<sup>c</sup> & Ann Sherman<sup>d</sup>

## Abstract

Many schools and school systems have been deliberately working towards full implementation of Assessment for Learning for more than a decade, yet success has been elusive. Using a leader's implementation of Assessment for Learning in one school as an illustration, this article examines eight positional leaders' experiences as they implemented both the 'spirit and the letter' of Assessment for Learning at all levels. This longitudinal qualitative research study draws on the experiences of leaders from Alberta, British Columbia, Germany, Georgia, Hawai'i, Manitoba, New Zealand and Ontario. The authors identify five findings that show how positional leaders use Assessment for Learning as the focus for system-wide change, as well as the change process itself.

*Too often in education we hear, 'This is what it says. Now you go and do it.'*

*Leader interview excerpt*

## Introduction

This article introduces findings from a longitudinal research study examining the experiences of positional leaders from Alberta, British Columbia, Germany, Georgia, Hawai'i, Manitoba, New Zealand and Ontario, as they work towards implementation of Assessment for Learning for students in their school system (size ranging from one school to many schools). Positional leaders exert their leadership mandate in different ways than other leaders. A positional leader is a leader with line responsibility – that is, one who works for an elected Board of Trustees, is in a position of fiduciary responsibility, who oversees policy and regulation development and who must account for the success (or lack of success) of the system in terms of its primary mission to educate students. When it comes to leaders' work, words are important and actions even more so; therefore, the research questions for this study were as follows:

How do leaders lead and maintain the focus on the sustainable implementation of Assessment for Learning across a school or system? What actions do they take?

How do leaders use Assessment for Learning as they act to support others – students, adults, schools and systems – to learn? What successes, challenges and issues emerge?

How do leaders bring alignment across the school or system?

Assessment for Learning is defined in a variety of ways by different researchers and systems; however, for the purposes of this study, we use the definition emerged from the first International Symposium on Assessment (2001) where it was

Page 1

---

**Reference:** Davies, A., Busick, K., Herbst, S. & Sherman, A. (2014). System leaders using assessment for learning as both the change and the change process: developing theory from practice. *Curriculum Journal*, DOI: 10.1080/09585176.2014.964276.

**Note:** This is an Accepted Manuscript of an article published by Taylor & Francis in *THE CURRICULUM JOURNAL* on October 30, 2014, available online: <http://www.tandfonline.com/> DOI: 10.1080/09585176.2014.964276.

defined in this way: Assessment for Learning is formative assessment plus the deep involvement of learners in the assessment process. It is a process of both learners and teacher being engaged in seeking and interpreting evidence to figure out where learners are in their learning in relation to what has been taught, where they need to go next in their learning and how best to get there. The processes that support this work include having clear learning goals, co-constructing criteria around quality and success, engaging in all forms of feedback for learning (self-assessment, peer assessment, feedback from others), collecting evidence of learning and using information to guide the next learning steps. We have deliberately used triangulation of evidence of learning from Social Sciences research methods, because classroom assessment, at its core, is a research undertaking (Davies, Herbst, & Parrott-Reynolds, 2011).

This study looks at the work, over time, of eight positional leaders in differing roles and international contexts. In these varied contexts, differing rules and regulations govern their actions and activities. Looking at leaders in various contexts informs both theory about leadership practices and the actions leaders might consider. Further, by examining the practice of leaders engaged in using Assessment for Learning as both the change they wish to bring about in their school or system and the vehicle by which the change is implemented, researchers sought to understand more fully the power of Assessment for Learning to support all learning. Clearly, a vital assumption of this work is, if Assessment for Learning is a powerful learning approach, it is likely to be a powerful support for any new learning. Further, since leaders lead change – lead learning – it makes sense that they use Assessment for Learning as a means to accomplish their work.

While professional learning communities are seen as a valuable vehicle to support system learning, the role of Assessment for Learning in supporting the learning of adults and systems has been under acknowledged in many parts of North America. For example, few of the chapter authors in a popular resource, *On Common Ground: The power of professional learning communities* (DuFour, Eaker, & DuFour, 2005), mention the importance of classroom assessment and the involvement of students in the assessment process. In this book, Stiggins (2005) alone focuses on the power of Assessment for Learning, while Sparks (2005) writes of the importance of involving students. Most authors focus on ‘common assessments’ and learning from data – both important yet insufficient – given what we know from the research.

Other research and writing in this area have focused on the need for school and system leaders and those charged with professional development responsibilities to support school and system implementation of Assessment for Learning (Black, Harrison, Lee, Marshall, & Wiliam, 2003; James et al, 2007; Stiggins, 2014; Swaffield, 2013; 2014). And, while it is important for school and system leaders to understand the importance of Assessment for Learning and to find effective ways to champion it, we have found that setting learning goals and providing support are insufficient.

## The research imperative: assessment for learning

Multiple studies over time clearly show that classroom assessment has the greatest impact on student learning and achievement of any educational innovation ever documented (Black & Wiliam, 1998). And, although these claims have been challenged by Bennett (2011), having Assessment for Learning as the focus of professional learning has increasingly become a focus of professional learning. Recently, Popham (2011), tallied the number of studies supporting Assessment for Learning at more than 4000 adding to the evidence that this is no longer a new way of thinking (Shepard, 2000). An early study by Stiggins and Bridgeford (1985) prompted researchers to reconsider the importance of classroom assessment. Crooks’ (1988) and Black and Wiliam’s (1998) reviews of the research relating to classroom assessment added to the urgency. Recently, Gardner (2012) and James et al. (2007) have documented implementation across schools and groups of schools in the United Kingdom. And, in April 2014, 36 researchers based in 12 countries met to discuss the latest research findings in this area (Davies, Laveault, & Sherman, 2014). Direct examination of Assessment for Learning in classrooms has resulted in deeper understanding of how to support all students’ learning by implementing research-based changes in the classroom assessment process (Allal, 2010; Birenbaum, 2014; Black et al., 2003; Gardner, 2012; Stiggins, 2007; Wiliam, 2010). Researchers have shown that when teachers use Assessment for Learning, students learn more and teaching becomes more effective (Allal, 2010; Andrade & Cizek, 2010; Andrade, 2013; Birenbaum, 2014; Marshall & Drummond, 2006; McMillan, 2013; Ruiz-Primo, 2007).

There is increasing evidence to suggest that the learner’s involvement in the assessment process is a powerful way to support learning through co-regulation (Allal, 2010, 2011; Andrade & Brookhart, 2014). Researchers have argued that the goal of self-regulation is important (Baumeister & Vohs, 2004). Also, researchers studying how people learn (Caine &

Caine, [2011](#); Covington, [1998](#); Darling-Hammond, [2001](#); Darling-Hammond & Richardson, [2009](#); Sousa, [2011](#)) have applied their findings to all people whether they are students in schools or other learners in different contexts. The role of Assessment for Learning as a tool to support adult learning has also been explored in higher education (Geiger, Jacobs, Lamb, & Mulholland, [2009](#); Sadler, [2013](#)) and as an instructional strategy in supporting adults to learn more about assessment (Davies, [2005](#); Davies, Herbst, & Parrott-Reynolds, [2012](#); Klenowski & Wyatt-Smith, [2013](#); Willis & Adie, [2013](#)).

## The research imperative: leadership for learning

In the foreword of the book *Transforming Schools and Systems Using Assessment for Learning* (Davies et al., [2012](#)), LeMahieu ([2012](#)) writes about the power of servant leadership as initially framed by Greenleaf ([2002](#)). The servant leader shares power, puts the needs of others first and helps people develop and perform as highly as possible. This work dovetails with work done by others in the area of distributed leadership (Copland, [2003](#); Spillane et al., [2004](#); Timperley, [2005](#)). Spillane ([2005](#)) describes distributed leadership as a practice that focuses on interactions between and among educators such as:

grade-level meetings and the scheduling of teachers' prep periods. From a distributed perspective, these routines, tools, and structures define leadership practice; the specific situation both enables and constrains leadership practice. Aspects of the situation define and are defined by leadership practice in interaction with leaders and followers with the structures, routines, and tools being the means through which people act. Yet, these same structures, routines, and tools are created and remade through leadership practice. (p. 147)

Building on this work, Timperley ([2005](#)) studied distributed leadership in New Zealand schools. She posits that leadership in schools is 'almost inevitably distributed, and the issues to be considered are how the leadership activities are distributed and the ways in which this distribution is differentially effective' (p. 3). Noting that 'on-the-ground observations are essential to developing these important concepts' (p. 4), she argues that leadership *activities* as well as artifacts and relationships form the essence of a distributed leadership.

## The research imperative: leaders and assessment for learning

As research-based evidence has mounted, the implementation of Assessment for Learning as a set of powerful learning and teaching strategies across schools and systems has been of increasing interest (Black et al., [2003](#); Davies et al., [2011](#); Gardner, Harlen, Hayward, Stobart, & Montgomery, [2010](#); Hayward & Spencer, [2010](#); James et al., [2007](#); Moss et al., [2013](#); Stiggins, [2014](#)). Also, as researchers have tracked the successes and dilemmas of implementation, they have documented the importance of school leaders being deeply involved in the work if Assessment for Learning is to become a reality for students in classrooms (James et al., [2007](#); Smith & Engelsen, [2012](#); Swaffield, [2013](#); 2014).

Researchers have emphasised the importance of school and system leaders and those involved in policy development, in understanding Assessment for Learning and being supportive of its use as a key instructional strategy (Black et al., [2003](#); James et al., [2007](#)). Assessment for Learning as a transformative tool for schools and school systems is receiving more attention (Davies et al., [2012](#); James et al., [2007](#); Smith & Engelsen, 2012; Swaffield, [2013](#); 2014; Townsend, Adams, & White, [2010](#)). This focus is also evidenced by a growing number of researchers across the jurisdictions from North America, the UK, Continental Europe, Australia, New Zealand and, most recently, Singapore. This focus has led to numerous publications and an International Conference focused on Classroom Assessment (Chester, U.K. 2001; Portland, OR, USA 2004; Dunedin, New Zealand, 2009; Solstrand, Norway, 2011; Fredericton, NB, Canada, 2014). This invitation-only conference invites teams from different global regions to bring forward the latest classroom assessment information from the perspective of research, policy and professional learning. During recent discussions amongst researchers gathered (April 2014), it was noted that there is little research examining what positional leaders do to lead the implementation of Assessment for Learning.

The origin of the concept of 'principal' was 'principal teacher.' Principals and superintendents were seen to be teachers of teachers. Recognising that part of one's leadership role is that of 'teacher' can shift one's thinking regarding the learning of others (Senge, 1990, 2008). Schools and systems need to learn (Fullan, 2007; Senge, 1990, 2008). Leading learning is important part of a leader's role especially when, as noted earlier, leadership activities, artefacts and relationships form the essence of distributed leadership (Timperley, 2005).

Therefore, if Assessment for Learning is a powerful tool for student learning, then it may also be key in support of adult learning and the systems in which adults work. Leadership activities include attending to the learning needs of all learners, both children and adults, gathering evidence of learning over time and building the kind of relationships that support ongoing work and learning. If this is true – and our experience in working with school and system leaders has shown great promise – then it is important to examine the role of assessment in the service of learning through the lens of adult, school and system learning. This requires a more thorough investigation of the leader's role in the implementation of Assessment for Learning.

## Context for the study

As a result of the increasing demand for support in the area of assessment in the service of learning, a week-long symposium for educational leaders was designed. This symposium brought together participants and resource staff to learn from and alongside each other. Between 1999 and 2010, more than 350 participants from Canada, China, Germany, New Zealand, Norway, United Kingdom and the United States travelled to Vancouver Island, British Columbia, Canada, to take part in this experience.

By way of support, the symposium involved resource people that varied from year to year, but included Kathy Busick, Pacific Regional Education Laboratory, Hawai'i, USA; John Gardner, Queens University, Belfast, Northern Ireland; Sandra Herbst, Assistant Superintendent, River East Transcona School Division, Winnipeg, Manitoba, Canada; Paul LeMahieu, Carnegie Foundation, USA; Beth Reynolds, Georgia Leadership Project, GA, USA; and Rick Stiggins, ATI, Portland, OR, USA, as regular attendees.

The purpose of the symposium was to provide a forum for teams to design plans for the implementation of Assessment for Learning in their schools or systems. Together, participants and resource people shared their knowledge and experience in the area of quality classroom assessment. They also learned about using Assessment for Learning to support transformative change at the classroom, school, and system levels. Each year the symposium was guided by the following questions:

1. How can schools and school systems increase the use and effectiveness of Assessment for Learning in support of student learning?
2. How can the principles underlying Assessment for Learning be used to support adult learning?
3. How can the principles underlying Assessment for Learning guide thoughtful plans for change in classrooms, schools and systems?
4. How can the work of schools and systems be sustained using assessment in the service of leadership and learning?

The symposium experience deliberately modelled the use of assessment in support of adult learning. Learning activities were carefully designed to assist team members in formulating a plan to guide the implementation of Assessment for Learning and quality classroom assessment in their jurisdictions. Participants utilised the support of resource people and each other to create unique and contextualised plans. Feedback protocols were used to allow participants to revise their plans during the symposium. Each plan – while specific to the context for which it was designed – deliberately used assessment in the service of adult, school and system learning. At the conclusion of each symposium, team members were invited to remain connected with the resource people. They were also invited to record an account of their system's assessment for learning journey.

Over the 12 years that the symposium was held, attributes of successful implementation of Assessment for Learning emerged, both as a result of the symposia and of the work between the gatherings as participants created plans for implementation, informally documented successes, failures, emerging challenges and shared their ongoing learning through conversation, writing, and ongoing consultation. This pointed focus resulted in an informal 10-point 'checklist' of the attributes of a successful implementation process to guide the work of leaders:

***Attribute 1: The learning destination, in relation to assessment in the service of learning, is clear and the pathway to success is continually revised based on ongoing feedback.***

The Assessment for Learning initiative is identified and 'adopted' as part of the work of the system (not just a group of individuals), typically in the form of system-wide goals. Day-to-day decisions are informed by Assessment for Learning processes. The system comes to evaluate what it values – and what it values is learning and assessment in the service of that learning.

***Attribute 2: Assessment in the service of learning is used in classrooms.***

Assessment for Learning is deliberately and intentionally used to support the learning of students. Students have clear learning destinations and are involved in the classroom assessment process. They use assessment information to inform their next learning steps, while teachers collect valid and reliable evidence of learning from multiple sources (triangulated) over time and use that information to inform and guide their next teaching steps.

***Attribute 3: Assessment in the service of learning is used to support adult learning.***

Assessment for Learning is deliberately and intentionally used to support adult learners, thereby impacting on the structure of the learning itself.

***Attribute 4: Assessment in the service of learning is supported and used by leaders.***

A leadership team responsible for system change is identified and leads the initiative both at the school and system levels. This team constantly checks to ensure that it uses Assessment for Learning practices.

***Attribute 5: Positional leaders deliberately and publicly model the use of assessment in the service of student, adult, school and system learning.***

Positional leaders (those with the responsibility to evaluate others) are part of the team leading the implementation of assessment in the service of learning and have a necessary and ongoing public role in the implementation process.

***Attribute 6: Both qualitative and quantitative evidence of learning from multiple sources collected over time and at multiple levels (student, classroom, school and system) are used to inform and support continued work and learning.***

The collection and use of a continuous stream of information (both qualitative and quantitative) are essential if change is to be supported and learning to be successful. This is essential to the inquiry-based nature of successful professional learning at the individual, school and system levels.

***Attribute 7: Ongoing collegial examination of evidence of learning results in informed professional judgement.***

Success requires that educators continually examine evidence of learning from multiple sources collected over time so as to ensure a common understanding of quality and proficiency. The deliberate process of looking at evidence of learning with one another can result in more informed and consistent professional judgement.

**Attribute 8: The process of change cannot be scripted in advance, but rather evolves in response to ongoing feedback and changing contexts.**

While there are some challenges that are likely to emerge, the order and the exact nature of the challenges differ from one context to the next. It is essential that assessment supports and informs the learning and the 'next steps' continually, using tight feedback loops.

**Attribute 9: The assessment in the service of learning initiative is supported over time.**

Positional leaders are mindfully and publicly supportive of the system priority or goal over an extended period of time. This includes public statements, use of Assessment for Learning strategies in leaders' work, budget allocations and explicit alignment of policy and regulations.

**Attribute 10: The larger community is engaged and informs ongoing actions.**

Communities of practice are deliberately permeable and extend beyond those immediately responsible for the work. This includes people who are affected by and can contribute to the work. For example, students, parents, teachers, school leadership teams, system leadership, trustees, cultural leaders, community members, consultants and university researchers may be intentionally involved at key points in the initiative.

## Data collection

This research study focuses on the ongoing work in eight school systems as seen through the eyes and experiences of a positional leader in each system. Each was responsible for implementing Assessment for Learning as a system goal. The timeline varied from jurisdiction to jurisdiction, with the shortest implementation at the time of the interviews taking place over 3 years and the longest over 10 years. The systems ranged in size from 350 students to more than 180,000 students.

All positional leaders included in this study had attended the symposium one or more times, either by themselves or with colleagues with the exception of one. They continued to work with at least one of the resource people in some capacity. This ongoing learning-focused relationship allowed the researchers to have confidence that the work was indeed being undertaken over a significant period of time. There was substantial triangulated evidence from documents, conversations and observations from each system. And finally, the leaders involved in the study were available for a one-to-two-hour follow-up interview.

Each leader was sent a list of questions prior to the interview. They were told that there would be an opportunity to check their transcript for clarity, accuracy and meaning. Participant interviews included open-ended questions such as given below:

- Why did you start this work? What was the impetus?
- Describe, in general terms, the Assessment for Learning initiative year by year, highlighting the actions taken.
- Describe both the internal and external supports given to this work over time.
- Describe the challenges (internal and external) that emerged.
- Describe the results of the work in your school or system.
- What evidence of learning is available?
- How would you summarise the internal findings?
- What external verification exists? Summarise the external findings.
- What are your current plans with regard to this work?
- What advice would you give others undertaking this work?

A study such as this is grounded in professional practice and aims to describe key features of that practice. It is different from studies that seek to prove or disprove a particular theory. This study seeks to support the conversation of researchers and practitioners concerning ongoing sustainable implementation of Assessment for Learning.

Collecting evidence across time and combining survey data and interview data, along with examining the supporting documents results in data that are triangulated, enhancing the validity of the results (Lincoln & Guba, 1984). This collection and analysis of data are aligned with Lincoln and Guba's (1984) notion of trustworthiness – evidence collected over time from multiple sources can be used to inform the work of others engaged in similar work.

While acknowledging that a researcher always influences the research and the researched, the focus of this study was to record the leader's perspective of what happened during implementation and use the triangulated data collected over time to make sense of it. We chose to use a qualitative approach because it is more amenable to exploratory inquiry, and therefore, more appropriate to early stages of innovation and related knowledge acquisition. This study was designed to develop theory from practice. The results are not generalisable although they are 'trustworthy.' The 'trustworthiness' has been obtained through onsite observations in schools and systems, consideration of work produced and shared during professional learning events, ongoing recorded interviews and through a final set of interviews that were transcribed and analysed.

Qualitative studies permit researchers to ask questions such as, 'What is going on here?' Research interviews are an important source of evidence (Kvale, 1996; Mishler, 1986), as using open-ended questions allow for the generation of new theories. Grounded theory follows from the data rather than preceding it. Glaser and Strauss (1967, p. 3) indicated that grounded theory 'fit(s) the situation being researched.' Grounded theory is 'discovered empirically rather than expounded a priori...Grounded theory can play the role of conventional theory for any subsequent study' (Lincoln and Guba, 1984, p. 206). New theories are needed when a significant change occurs. Implementing Assessment for Learning across a jurisdiction and doing so in such a way that it becomes sustainable is potentially just such a significant change.

Ten positional leaders were interviewed. Two transcripts were removed from the original list of 10: the first because the leader died suddenly and the transcript could not be confirmed, and the second because, although hard copy notes were taken, the digital recordings were faulty and unavailable for transcription and verification. The eight positional leaders who remained have, as noted earlier, supervisory responsibilities and either report to or are part of the leadership team that reports to an elected board of trustees. All of the eight school systems vary in size and structure (see Table 1 – School System Leaders), geographical and political contexts and operate under differing rules, regulations and policies.

The interview transcripts were confirmed and the details checked against the records of proceedings and against onsite visits. Then, the transcripts were divided into chunks of meaning. Each meaning chunk was sorted into similar groupings across the transcripts. Two sorts were done in order that the groupings accounted for all the 'meaning chunks' in the transcripts. While some statements could have been put into more than one grouping during analysis, they were not. And, none of the meaning chunks were excluded from the sort and the resulting groupings. Each member of the writing team reviewed the data analysis and the statements of findings. Three members of the writing team were familiar with the leaders and the systems in which they worked. One research team member, while unfamiliar with the leaders interviewed, has a background in leadership and assessment. These varied perspectives and checkpoints add to the 'trustworthiness' of the findings. All members of the writing team agreed with the groupings and the statements of findings used to summarise the ideas in the grouping. The 'big ideas' – the findings – emerged from the data, rather than the data being fit into a pre-existing model. These collections were then analysed from the perspective of the research questions to identify the actions leaders take when using Assessment for Learning as the guiding process for implementation:

1. How do leaders lead and maintain the focus on the sustainable implementation of Assessment for Learning across a school or system?
2. How do leaders use Assessment for Learning to help others – students, adults, schools and systems – learn? What successes, challenges and issues emerge?
3. How do leaders bring alignment across the school or system?

<b>Table 1</b>	<b>School System Leaders</b>		
<b>Location</b>	<b>System Focus</b>	<b>Students</b>	<b>Schools</b>
Alberta, Canada	K-12 System Leader	35,000	88 schools
British Columbia, Canada	K-12 System Leader	5200	18
Germany	K-12 System Leader	1200	2
Georgia, USA	K-12 System Leader	25,000	40
Hawai'i, USA	K-12 System Leader	185,000	289
Manitoba, Canada	K-12 System Leader	20,000	42
New Zealand	Years 1 – 6 System Leader	350	1
Ontario, Canada	K-12 System Leader	121,000	200

## Findings

What does it look like when positional leaders intentionally use the process of Assessment for Learning for adults, schools and systems to support the implementation of Assessment for Learning? In this study, we are examining the *ACTIONS – the DEEDS* – that leaders take as they use Assessment for Learning to help the system learn. In the following section, the findings are described more fully, along with the leadership actions taken. Excerpts from the interviews with positional leaders are used to illustrate each finding. There are five findings that emerge from the data:

1. Leaders exercise professional judgement regarding system-learning initiative.
2. Leaders are engaged in using Assessment for Learning to support the system-learning initiative.
3. Leaders value both qualitative and quantitative evidence of learning.
4. Leaders engage themselves and others in examining feedback for learning to monitor the progress of the system-learning initiative.
5. Leaders prioritise support and, as a result, others learn.

### Finding 1: leaders exercise professional judgement regarding the system-learning initiative

Each of the positional leaders interviewed began their system-learning initiative after considering their context, the research base and accounts from other leaders engaged in the systemic Assessment for Learning implementation. And, as time went on, the leaders were able to persevere in pursuit of the system-learning initiative.

Leaders interviewed said:

The superintendent, without question, was really critical to making it work. None of that work would have started without her vision. (Georgia)

Prior to 1998, we were going through an accreditation self-study. It became clear that we were not meeting the standards for having public statements and policy about assessment and evaluation, its stated practices and understanding of processes...the early work was to survey the faculty to find out what assessment and evaluation practices they were actually using. There were not a lot of commonalities. In early 2001, we surveyed the faculty about the beliefs around assessment. There was a definite gap between beliefs and practice. People tended to be more idealistic about their beliefs than what they were actually doing in the classroom.... In November 2001, we set up an assessment policy group...And now people...

keep saying, “It’s so good that we all agree. That we all know this is where we’re going. And that we’re all practicing from the same handbook.” (Germany)

From a practical, pedagogical and a policy perspective, we wanted to bring people together around something that was meaningful and that was something we could all see ourselves doing including the Board of Trustees. We decided upon assessment. There was pressure to find something that mattered...for over a decade, assessment was the number one priority of the system. We persisted and in that persistence we signaled to the entire educational community that we were committed to deep learning and understanding by everyone. (Manitoba)

The culture of our Board was such that becoming assessment literate was something we saw as a journey and we worked through lots of challenges. It’s something that has been a centerpiece in all of the professional development. We still connect Assessment for Learning to most pieces of PD that we do. My former Director liked to use the phrase – *stay the course* – and I think that’s absolutely critical. Assessment has been a thread through our work over a decade and a half now and I think that everybody in the system understands when we talk about Assessment for Learning that that is the driver for us...and I think that pays off in the end. (Ontario)

Three actions are evident from the data collection. Leaders:

- deliberately select and publicly support Assessment for Learning;
- maintain a persistent focus;
- strategically introduce and seed the initiative based on data and contextual information.

## **Finding #2: leaders are engaged in using Assessment for Learning to support the system-learning initiative**

As a result of using Assessment for Learning principles, structures and strategies, these leaders deliberately and intentionally increased the expectations for everyone to be involved and engaged in Assessment for Learning in support of student achievement. This process was also consciously used to support the learning of adults and helped to bring alignment of action throughout the system.

The leaders interviewed said:

I use ‘*tickets out the door*’, feedback loops, doing homework, using a text...At the end of the training itself, there’s built-in processing and reflection time but that just makes common sense. Doing whatever you’re advocating, showing them samples of what it looks like for it to be done well.... I tried to model the principles of Assessment for Learning and build them into the framework...It made a huge difference. They got to see it live. They recognized Assessment for Learning in action. (Georgia)

Do kids really know, in our school district, what a successful English student looks like? Social Studies...are teachers on the same wavelength?...This is about creating that learning destination. What does success look like? And do parents know? Are we consistent? (British Columbia)

We’ve been modeling. For example, with the strategic plan goals, I said, ‘Here are my plans for this year. Last April, I said I was going to do...and here’s what I did. My thoughts for next year are...’ Then, for the last meeting, school administrators were supposed to come up with their plans. That becomes a conversation...with the staff... (British Columbia)

At staff meetings, the administrators modeled, 'Okay, here's our learning intentions for today's meeting.'...This year when we walk in classrooms, we hope that the learning intentions are really clear. We're going to be asking the kids, 'What are the learning intentions?' (British Columbia)

If you don't walk the walk there's not any point in talking the talk. Our new appraisal system has just been written. I know that was something the principal in the elementary school was talking about...He felt that that piece was missing from the new appraisal they had just written.... He thought that as we do this portfolio type thing with the assessment of the children, we need to be asking teachers to keep a portfolio of a variety of things in much the same way. (Germany)

...we wanted to make sure there was a balance...I mean if we think about a balance, it's way more internal. It's that gradual release of responsibility, that notion. Now the work is with our administrators – our experts. They really are! We've invested lots of time and energy and they've risen to that call and so the resources have become very much internal. (Manitoba)  
We wanted to have a multi-layered, multiple entry point professional development plan. We always planned professional development three years out... with big ideas and concepts. For our implementation plan...every school needed to have an assessment leadership team which was comprised of one of the administrators, someone from the student support services... and a number of teachers... and one of those teachers needed to be a specialty teacher...Every year we meet with that lead group – those teachers and that leadership team – two or three times a year to give them real deep learning. It is not the train the trainer. It isn't 'this is what we're doing now go and do it back at the ranch.' It is 'these are the things that we want you to know more deeply about assessment and let's talk about some ways that you're working with your staff.' (Manitoba)

We had the support at the time of the Chair of the Board and the Director of the Board. Our Chair of the Board and a Trustee came with us to Portland, Oregon when we went as a team... We were supported with the dollars for release time that helped us to become this intensive team. There were other options for entry into assessment. Some schools came out for three or four days of assessment PD over the year. The third entries were after-school sessions for anybody who was interested. We had layers of assessment opportunity. I was in that group where we considered ourselves part of a training group around assessment practices. (Ontario)

Three actions are evident from this data collection. Leaders:

- use Assessment for Learning as a leadership tool (showing samples, co-constructing criteria, coming to common agreement around quality) to do the work they are meant to do;
- model and coach others using Assessment for Learning principles, structures and strategies;
- use Assessment for Learning principles, structures and strategies with every group implicated in the system-learning initiative (students, teachers, administrators, trustees, parents, unions).

### **Finding #3: leaders value both qualitative and quantitative evidence of learning**

In order to support the use of Assessment for Learning, leaders expect that the evidence of application of Assessment for Learning is collected by district staff, including the leader himself or herself, school leaders and teachers. The evidence is collected from multiple sources over time, in order to increase the reliability and validity of the findings (Lincoln and Guba, 1984). This is to deliberately model alignment, so that teachers are not the only ones triangulating the evidence of learning. Leaders explained that as alignment throughout the system increased, the need to rely solely or heavily on external data shifted. Leaders also reported that they regularly revisited the forms of assessment data collected and the uses to which it was put.

The leaders interviewed said:

We have spring assessments. And I put it out clearly, 'This is why we do this. We all want to know are our students learning? Where do they need to go next in their learning? Is what we are doing helping support them? And if not, we need

to try a new strategy.’ This information is for everybody, principals, teachers, senior management. We use the rubric to score the reading or writing or whatever, and teachers are talking the whole time, but at the end with each class set, we give them descriptive feedback. Here's what we've noticed with this class in terms of strengths and possible next steps. At the very end, when everyone is done, we do the same thing. We ask ourselves what do we notice across the district in terms of strengths of our students in reading...our feedback is not numbers, it's descriptors. (British Columbia)

When we started to build up assessment...to build a balance of both formative and summative assessment...moving to evidence based was the second powerful thing. (Hawai'i)

We're one of the top functioning Boards in the province and people attribute that to attention to assessment. We have paid attention to a lot of internal measures...not to find summative points but to find instructional starting points and to use ongoing classroom data as a way of validating where they go next...it's not just formal data that we're looking for. We are looking for classroom data. We're looking for observations and conversations and conferencing with kids [and what] we're asking kids to produce for us or plan for them. And that's valid data so we want to honour that. (Ontario)

If we're asking teachers to collect triangulated evidence we needed to model that ourselves. And so, along with the traditional school plan year-end report, administrators began to send us video clips of kids and teachers in action, lesson plans that illustrated the use of Assessment for Learning, images and other student, teacher and leader artifacts in order to let us know that they were meeting their school plan outcomes. (Manitoba)

Initially when those 600 teams were working, we had them culminate that work in the form of a portfolio where they proved they had gone back and implemented what was to be done... (we've continued to do) portfolios... a team of administrators and coaches go through with a rubric and actually look at those and provide participant feedback, then they go back to the teams... (Georgia)

Four actions are evident from the data collection. Leaders:

- require triangulated evidence of learning from all levels of the system (system, school, teacher appraisal level and classroom level);
- transform external pressures (e.g. data from external sources to the school and/or system) into powerful supports for Assessment for Learning goals;
- value both qualitative and quantitative evidence as proof of student, adult, school and system learning;
- model triangulating evidence of learning to inform one's own work.

#### **Finding #4: leaders engage themselves and others in examining feedback for learning to monitor the progress of the system-learning initiative**

When leaders provide time, energy and resources to implement a new initiative, they need to know whether or not the initiative is ‘on track,’ both immediately and over time. They deliberately gather data at the beginning of the work, throughout the implementation process and then at various end points to highlight the progress made in the implementation cycle and to illustrate the difference that leaders, teachers and students make when they use Assessment for Learning.

The leaders interviewed gave multiple examples of leading data – the data that kept the initiative on track by providing information (both qualitative and quantitative data) to inform ‘just-in-time’ decision-making. Leaders also appreciated the power of lagging data – that is, the results that emerge after some time has elapsed and that serve to inform longer-term decision-making.

Leaders deliberately looked for feedback to confirm that Assessment for Learning was being implemented across the system. The role of data analysis in support of adult learning began to also include qualitative evidence. Professional

conversations related to data also increased educators' confidence in using triangulated evidence in support of student learning.

The leaders interviewed said:

The policy development became an education in and of itself because it involved multiple feedback groups from each of our 42 schools. We talked to Trustees...We were working with the teachers' association and getting feedback from them. We also included some parent voices. There was always facilitation by someone on the steering committee...wasn't just the superintendents leading it. It was teachers and administrators from every level. They were identified and selected by their members. (Manitoba)

I think we've come a long way. The Japanese have a word for this – they call it kaizen. Kaizen means always spiraling forward. So not reinventing the wheel but building and I think over the past few years we've been practicing kaizen here...we've taken what we've learned and we're always building upon it...you have to do everything in your power to also walk the talk and do away with all the obstacles that are serving as barriers. (Hawai'i)

In an elementary school, the principal and the learning assistance teacher...meet with the teacher. The teacher...creates the class profile – this month, this is what I've learned about my kids, here are their strengths, here's some areas that I think they need to work on, here's some individual concerns. So the team...creates a school profile. So that (school) team goes away thinking...here's how we can allocate support...it is like the administrator Assessment for Learning. (British Columbia)  
The province has also assisted us tremendously with a self-assessment...it's being used as a self-assessment tool for schools and we look at it from a system perspective as well. (Ontario)

...then what we discovered, as we monitored the feedback from our schools, that there were other areas that were coming out that we wanted to go deeper into... (Alberta)

Two actions are evident from this data collection. Leaders:

- gather the feedback from multiple perspectives and at different levels (e.g. students, teachers, parents, schools, system, Trustees and community partners);
- make adjustments based on the analysis of the evidence of learning – ongoing assessment information – in relation to the system-learning initiative, including revisiting policy, rules, regulations and procedures.

## **Finding #5: leaders prioritise support and, as a result, others learn**

Leaders, as they *USE* the principles, structures and strategies of Assessment for Learning in their leadership, deliberately involve school leaders in *DOING* Assessment for Learning. As the leaders sought to embed Assessment for Learning in classroom practice, school leaders were expected to use Assessment for Learning principles, structures and strategies in support of their staff's learning. This deliberate process of aligning 'word and deed' served to further embed Assessment for Learning into the culture of the school and/or system. Professional conversations moved beyond being merely accountable for the learning to actually being responsible for the learning. This included using assessment data to inform the next instructional and leadership actions based on the needs revealed. As the work progressed, leaders continually reviewed their use of limited time and resources in order to ensure that they were aligned with the system-learning initiative.

The leaders interviewed said:

The place we really started was with our administrators and that was for about a year and a half. We also worked with teachers, but we put our resources and our energy into working with our administrators. As the policy was placed, there was a lot of education of the Board of Trustees to understand why our policy looked like this. We worked with parent groups.

Page 12

---

**Reference:** Davies, A., Busick, K., Herbst, S. & Sherman, A. (2014). System leaders using assessment for learning as both the change and the change process: developing theory from practice. *Curriculum Journal*, DOI: 10.1080/09585176.2014.964276.

**Note:** This is an Accepted Manuscript of an article published by Taylor & Francis in *THE CURRICULUM JOURNAL* on October 30, 2014, available online: <http://www.tandfonline.com/> DOI: 10.1080/09585176.2014.964276.

That was important. We had newsletters and articles. We had parents writing newsletter articles. We had kids writing newsletter articles. (Manitoba)

We've got to align our resources with what our goals are... We can't spend money unless it's focused on learning and so if you don't have a learning goal then I guess there's some other department that can use this money. So that's how I did it and it took a lot of guts because it's easier the other way around. (British Columbia)

We built all those things aligned with our strategic goals... one of the things that I learned from past experience is once you create something, you need to build up an infrastructure where it lasts. (Hawai'i)

Funding has been important in supporting professional development... nobody would have got any place in the school with assessment without the support of the Director. He had to put his money where his mouth is and so if there's no financial concern, that's because the Director supported his administrators and sold it to the board. (Germany)

We have very limited pull-out workshop sessions anymore. We try and get our professional development as close to the classroom as we can and the learning networks gets groups of teachers and leaders together and then from the conversations around the learning network table we have to get into classrooms. (Ontario)

Three actions are evident from this data collection. Leaders:

- prioritise and supervise the learning of other leaders, holding themselves and others responsible for taking the initiative forward;
- provide differentiated support (time, materials, expertise, opportunity);
- build the expertise of others, using Assessment for Learning in support of adult, school and system learning – distributed leadership – so the system-learning initiative can spread.

## **An example: account from one positional leader**

One leader's transcript has not been included in the illustrative comments above deliberately so as to provide an example that shows all five findings held in one account.

When I left, we had 78%–80% of our year 6 kids meeting expectations: it had been 20%.... (Finding #1)

We had been told to use Assessment for Learning but we didn't really understand what was meant... then in a professional development session I started to see the purpose... the next thing was to get teachers' buy in. (Finding #1)

We had a provider come and do some professional learning. She talked about it: 'This is my learning intention. Here are the success criteria.' We developed success criteria together. (Finding #2)

Then we built Assessment for Learning into classroom observation which the school leaders used as part of their supervision of teaching practice. (Finding #3)

We also looked at the teachers who were getting the best results. And the teachers who were getting the best results were using the Assessment for Learning process. (Finding #4)

I had been working with the senior leadership team and there were some teachers who were passionate about teaching writing well. I asked: 'Who would like to be on a writing team?' We gave them release time. They worked as a team and developed expectations. And then it was at the heart of the classroom... Once we got it happening in writing, we said for all

lessons, this is what we expect... We asked, 'What would you expect to see?' They all started independently and then we shared the co-constructed criteria and realised it should be clear to the kids as well... (Finding #5)

We started having Friday meetings as a whole staff for 20 minutes or so where we'd do a lot of administrative [tasks] really fast so that the staff meetings and the teacher meetings could focus more strongly on learning. It was an approach that went really well. (Finding #5)

## Impact on achievement

Assessment for Learning, defined earlier, is formative assessment that deeply involves learners in the assessment process. Research affirms its positive effect on student achievement. The leaders interviewed all the provided evidence in terms of student achievement as a result of this work. One leader said:

It's hard to put your finger on hard evidence that this work was making a difference in terms of standardised data. Scores continue to rise but there were so many things going in the right direction in the district that it's hard to isolate this particular focus [AFL] was the one that caused the scores to go up. But you definitely got a sense from observations in teacher classrooms and conversations with teachers that their entire understanding of what was supposed to go on in a classroom shifted.

Leaders also spoke about the documented improvements in student achievement, while maintaining the focus on Assessment for Learning as a system-wide initiative.

One leader shared these results from provincial assessments:

Our grade 3 results are consistently over the provincial average. One reason is those students are benefiting from teachers' work in this area. What is also very clear is that in grade 7 and 8 part of the provincial assessment is around engagement and part of the engagement piece is around self-assessment and goal setting. Our students do very well there. Our grade 12 results – they are at the end – we're not seeing those kinds of results yet...

Another leader explained:

The school, in 2003, had high reading and high math results but the writing results were appalling. About 20% of students (aged 10–11 and at the end of their primary schooling) were writing at expectations.... When I left we had 78%–80% of our year 6 kids meeting expectations where it had been 20%...

Yet another leader explained:

We're one of the top functioning Boards in the province and people attribute that to attention to assessment.

And finally, another leader explained that one indicator of success was that the Provincial Achievement Test results had improved more than 11% within two years of the Assessment for Learning project commencing and the above average performance continues still 10 years later. Two leaders did not provide results from external assessments – lagging data – in the course of their interview.

## Discussion of the findings

Positional leaders face many challenges in their work. The eight leaders in this study focused on Assessment for Learning as a key system-learning initiative. As the findings show, in order to achieve the 'spirit' of Assessment for Learning

throughout their systems, these positional leaders described actions that go beyond ‘servant leadership’ and ‘distributed leadership’ and what is typically thought of as ‘instructional leadership’ in the following three ways.

### ***Beyond words to deeds***

The leaders in this study used Assessment for Learning as a leadership tool as they deliberately, for example, showed samples, co-constructed criteria and worked to arrive at agreement around quality. They used Assessment for Learning principles, structures and strategies in support of adult learning. They did not simply ‘tell’ others what to do. For example, the positional leaders in larger systems who were interviewed gave examples of deliberately involving school leaders and adult learners in *doing* Assessment for Learning. As the system leaders sought to embed Assessment for Learning in classroom practice, they expected school leaders to use these same principles, structures and strategies with their faculty members and others just as they had. This modelling and coaching seems to have set the expectation that Assessment for Learning would be used to achieve better results related to student achievement. These leadership actions helped to bring alignment throughout the system. Leaders indicated that the more they used Assessment for Learning themselves, the more they saw it being used by others. This deliberate process of aligning ‘word and deed’ seemed to serve to further embed Assessment for Learning into the culture of the system.

### ***Beyond numbers to triangulated evidence of learning***

It is often said that we evaluate that which we value. Without exception, the positional leaders in this study work in an environment where educational systems are ‘judged’ by external data. Yet, the shift to using more Assessment for Learning in classrooms is often accompanied by the valuing of student voice and students’ ways of knowing. Classroom assessment values both qualitative and quantitative data that are collected over time in relation to that which must be learned. These positional leaders, as evidenced in the data, balanced external, lagging data about student achievement with classroom-based evidence gathered through triangulation: products students create, observations of students engaged in process, conversations with students about their understandings, and the meaning of the evidence being generated. Leaders deliberately modelled alignment, demonstrating that teachers were not the only ones being expected to value qualitative data and triangulate evidence of learning over time. The leaders interviewed explained that as alignment in terms of triangulation increased, the need to rely solely or heavily on external data diminished; data were being collected and valued from multiple sources and from all layers and parts of the system from classrooms, to schools and to the larger system level with multiple schools.

### ***Learning from frequent feedback loops***

Leadership literature has long promoted feedback loops as being incredibly important to system change and learning (Senge, 1990). Yet, in education, the search for effective feedback loops has resulted in more external testing in many jurisdictions. Researchers have documented the negative impact of increased external testing on learning and teaching (e.g. Berliner & Biddle, 1995; Stiggins, 2014). In this study, these positional leaders described how they were able to gather frequent feedback from multiple perspectives and at different levels – students, teachers, parents, schools, system, Trustees and community partners. They also explained how they used the data to make adjustments based on the analysis of the evidence of learning – ongoing assessment information – in relation to the system-learning initiative. They revisited policy, rules, regulations and procedures in order to expand the evidence of student and system-learning. This data served to inform ongoing ‘just-in-time’ decision-making and was available as a result of frequent feedback loops.

## Conclusion

Guided by the three research questions, this study seeks to better understand how positional leaders from diverse systems implemented Assessment for Learning as a sustained initiative in support of student, teacher and school learning, as well as using it as a key learning strategy for the system itself. The findings indicate that these positional leaders employed the following actions. Leaders

- exercise professional judgement regarding the system-learning initiative;
- are engaged in using Assessment for Learning to support the system-learning initiative;
- value both qualitative and quantitative evidence of learning;
- engage themselves and others in examining feedback for learning to monitor the progress of the system-learning initiative; system-learning initiative;
- prioritise support and, as a result, others learn.

This study demonstrates that leaders, when they assert their leadership, can make a powerful contribution to system and student learning and achievement. These leaders found Assessment for Learning – its principles, structures and strategies – to be a powerful *change process* that helped both large and small systems to learn and succeed, regardless of their jurisdictional context. The leaders interviewed demonstrated that using assessment – for adult learning, school learning and system learning – is a powerful leadership tool. This finding moves beyond leaders simply knowing what classroom innovations should look like and supporting adult learning to make that happen – an interpretation by some of distributed leadership. When leaders stop there, they may abdicate the essence of their leadership. These findings suggest that when leaders employ the tenets of Assessment for Learning as their leadership stance and action, they exert their leadership in incredibly impactful ways. In other words, Assessment for Learning is not only the change; it is also the process for change and for enacting leadership.

A companion study is currently underway to examine the role of leaders who support the learning of adults, schools and systems, but who do not hold positional responsibility. This study focused on eight positional leaders in eight different contexts. A further study is needed to determine whether or not the findings of this initial study are generally reflective of positional leaders engaged in implementing system-wide Assessment for Learning initiatives using Assessment for learning as the change process itself.

## Acknowledgements

The authors express their appreciation to the leaders who took the time to be involved in this research undertaking. Thank you for helping us learn more about your role as positional leaders and how assessment for learning can support you to make a difference. We also appreciate the helpful comments of reviewers.

## Notes on contributors

Anne Davies is the current Canadian lead to the International Assessment Symposium. She is a consultant and researcher supporting schools, systems and post-secondary institutions in the areas of assessment in their service of learning, leadership and system change.

Kathy Busick is a consultant in the area of Assessment in support of learning across cultures. She works to support educators in diverse settings as they build knowledge, skills and habits of mind valued within their culture into learning curriculum.

Sandra Herbst is a former assistant superintendent of a large urban school district and past President of the Manitoba Association of School Superintendents. She currently coaches leaders and supports system-learning initiatives across North America and beyond.

Ann Sherman is a full professor and dean of education. Her research focuses on engaging students in classrooms of innovation and inquiry by using formative assessment pedagogies.

## References

- Allal, L. (2010). Assessment and the regulation of learning. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 3, pp. 348–352). Oxford: Elsevier. [[CrossRef](#)]
- Allal, L. (2011). Pedagogy, didactics and the co-regulation of learning: A perspective from the French-language world of educational research. *Research Papers in Education*, 26(3), 329–336. [[Taylor & Francis Online](#)], [[Web of Science @](#)]
- Andrade, H. (2013). Classroom assessment in the context of learning theory and research. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 17–34). New York: SAGE. [[CrossRef](#)]
- Andrade, H. L., & Cizek, G. J. (2010). *Handbook of formative assessment*. New York, NY: Taylor & Francis.
- Andrade, H. & Brookhart, S. (2014). *Assessment as the regulation of learning*. USA Team Presentation at 2014 International Assessment Symposium. Fredericton, NB, Canada.
- Baumeister, R. F., & Vohs, K. D. (2004). *Handbook of self-regulation: Research, theory, and applications*. New York, NY: Guilford Press.
- Bennett, R. E. (2011). Formative assessment: a critical review. *Assessment in Education: Principles, Policy & Practice*, 18(1), 5–25, DOI:10.1080/0969594X.2010.513678 [[Taylor & Francis Online](#)]
- Berliner, D., & Biddle, B. J. (1995). *The manufactured crisis: Myths, fraud, and the attack on America's public schools paperback*. New York, NY: Perseus Publishing.
- Birenbaum, M. (2014). Conceptualizing assessment culture in school. In C. Wyatt-Smith, V. Klenowski, & P. Colbert (Eds.), *Assessment for learning improvement and accountability: The enabling power* (pp. 285–302). Netherlands: Springer. [[CrossRef](#)]
- Black, P., Harrison, C., Lee, C., Marshall, C. B., & Wiliam, D. (2003). *Assessment for learning: Putting it into practice*. Buckingham: Open University Press.
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education*, 5(1), 7–75. [[Taylor & Francis Online](#)]
- Caine, R., & Caine, G. (2011, Autumn). How new research on learning is re-writing how schools work and teachers teach. *Mind, Brain, and Education: Implications for Educators*, 5(1), 19–26. [[CrossRef](#)]
- Copland, M. A. (2003). Leadership of inquiry: Building and sustaining capacity for school improvement. *Educational Evaluation and Policy Analysis*, 25(4), 375–395. [[CrossRef](#)], [[Web of Science @](#)]
- Covington, M. V. (1998). *The will to learn: A guide for motivating young people*. Cambridge: Cambridge University Press.
- Crooks, T. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58(4), 438–481. [[CrossRef](#)], [[Web of Science @](#)]
- Darling-Hammond, L. (2001). *The right to learn: A blueprint for creating schools that work*. San Francisco, CA: Jossey Bass.
- Darling-Hammond, L., & Richardson, N. (2009, February). Teacher learning: What matters? *Educational Leadership*, 66(5), 46–53. [[Web of Science @](#)]
- Davies, A. (2005). *The FG Companion: Course Teaching Notes*. Courtenay, BC: Connections Publishing.
- Davies, A. Herbst, S., & Parrott-Reynolds, B. (2011). *Leading the way to assessment for learning: A practical guide* (2nd ed.). Courtenay, BC: Building Connections Publishing.
- Davies, A. Herbst, S., & Parrott-Reynolds, B. (2012). *Transforming schools and systems using assessment: A practical guide*. Courtenay, BC: Building Connections Publishing.

---

**Reference:** Davies, A., Busick, K., Herbst, S. & Sherman, A. (2014). System leaders using assessment for learning as both the change and the change process: developing theory from practice. *Curriculum Journal*, DOI: 10.1080/09585176.2014.964276.

**Note:** This is an Accepted Manuscript of an article published by Taylor & Francis in *THE CURRICULUM JOURNAL* on October 30, 2014, available online: <http://www.tandfonline.com/> DOI: 10.1080/09585176.2014.964276.

- Davies, A., Laveault, D., & Sherman, A. (2014, April). *Fifth International Symposium on Assessment for Learning*. International Symposium on Classroom Assessment. Retrieved from <http://assessment4learning.com/>
- DuFour, R., Eaker, R., & DuFour, R. (2005). *On Common ground: The power of professional learning communities*. Bloomington, IN: Solution Tree.
- Fullan, M. (2007). *The new meaning of educational change*. New York, NY: Teachers College Press.
- Gardner, J. (2012). *Assessment and learning* (2nd ed.). London: Sage.
- Gardner, J., Harlen, W., Hayward, L., Stobart, G., & Montgomery, M. (2010). *Developing teacher assessment*. Buckingham: Open University Press.
- Geiger, V., Jacobs, R., Lamb, J., & Mulholland, J. (2009). An approach to student-lecturer collaboration in the design of assessment criteria and standards schemes. In J. Milton, C. Hall, J. Lang, G. Allan and M. Nomikoudis (Eds.), *ATN Assessment Conference 2009: Assessment in Different Dimensions* (pp. 137–145). Melbourne: RMIT University. Available at: [http://emedia.rmit.edu.au/atnassessment09/sites/emedia.rmit.edu.au/atnassessment09/files/ATNA09\\_Conference\\_Proceedings.pdf](http://emedia.rmit.edu.au/atnassessment09/sites/emedia.rmit.edu.au/atnassessment09/files/ATNA09_Conference_Proceedings.pdf)
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.
- Greenleaf, R. K. (2002). *Servant leadership: A journey into the nature of legitimate power and greatness* (25th ed.). New York, NY: Paulist Press.
- Hayward, L., and Spencer, E. (2010) *The complexities of change: formative assessment in Scotland*. *Curriculum Journal*, 21 (2), pp. 161-177. ISSN 0958-5176 (doi:<http://dx.doi.org/10.1080/09585176.2010.480827> %3E10.1080/09585176.2010.480827 %3E10.1080/09585176.2010.480827 )
- James, M., McCormick, R., Black, P., Carmichael, P., Drummond, M. J., Fox, A., MacBeath, J., Marshall, B., Pedder, D., Procter, R., Swaffield, S., Swann, J., & Wiliam, D. (2007). *Improving learning how to learn: classrooms, schools and networks*. London, UK: Routledge.
- Klenowski, V., & Wyatt-Smith, C. M. (2013). *Standards, moderation and teacher judgement: Policy and practice*. London: Sage.
- Kvale, S. (1996). *InterViews: An introduction to qualitative research interviews*. Thousand Oaks, CA: Sage Publications.
- LeMahieu, P. (2012). Foreword: Educators at the centre: Leading with heart as well as mind. In *Transforming schools and systems using assessment: A practical guide*. Courtenay, BC: Building Connections Publishing.
- Lincoln, Y., & Guba, E. (1984). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Marshall, B., & Drummond, M. J. (2006). How teachers engage with assessment for learning: Lessons from the classroom. *Research Papers in Education*, 21(2), 133–149. [[Taylor & Francis Online](#)], [[Web of Science @](#)]
- McMillan, J. H. (2013). *SAGE handbook of research on classroom assessment*. New York, NY: Sage.
- Mishler, E. G. (1986). *Research interviewing: Context and narrative*. Cambridge, MA: Harvard University Press.
- Moss, C. M., Brookhart, S. M., & Long, B. A. (2013). Administrators' roles in helping teachers use formative assessment information. *Applied Measurement in Education*, 26, 205–218. [[Taylor & Francis Online](#)], [[Web of Science @](#)]
- Popham, J. (2011, February). Formative assessment – a process, not a test. *Education Week*. Retrieved September 22, 2014 <http://www.edweek.org/ew/articles/2011/02/23/21popham.h30.html?>
- Ruiz-Primo, M. (2007). Exploring teachers' informal formative assessment practices and students' understanding in the context of scientific inquiry. *Journal of Research in Science Teaching*, 44(1), 57–84. [[CrossRef](#)], [[Web of Science @](#)]
- Sadler, D. R. (2013). Opening up feedback: Teaching learners to see. In S. Merry, M. Price, D. Carless, & M. Taras (Eds.), *Reconceptualising feedback in higher education: Developing dialogue with students*. (Chapter 5, pp. 54–63). London: Routledge.
- Senge, P. (1990). *The fifth discipline: The art and practice of a learning organization*. New York, NY: Doubleday.
- Senge, P. (2008). *The necessary revolution: How individuals and organizations are working together to create a sustainable world*. New York, NY: Doubleday.
- Shepard, L. (2000). The role of assessment in a learning culture. *Educational Researcher*, 29(7), 4–14. [[CrossRef](#)]
- Smith, K. & Engelsen, K. S. (2012). Developing an assessment for learning (AfL) culture in school: the voice of the principals. *International Journal of Leadership in Education*, 1–20. DOI: 10.1080/13603124.2012.699639. [[Taylor & Francis Online](#)]

---

**Reference:** Davies, A., Busick, K., Herbst, S. & Sherman, A. (2014). System leaders using assessment for learning as both the change and the change process: developing theory from practice. *Curriculum Journal*, DOI: 10.1080/09585176.2014.964276.

**Note:** This is an Accepted Manuscript of an article published by Taylor & Francis in *THE CURRICULUM JOURNAL* on October 30, 2014, available online: <http://www.tandfonline.com/> DOI: 10.1080/09585176.2014.964276.

- Sousa. (2011, Autumn). Mind, brain, and education: The impact of educational neuroscience on the science of teaching. *Mind, Brain, and Education: Implications for Educators*, 5(1), 37–44.
- Sparks, D. (2005). Leading for transformation in teaching, learning and relationships. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On Common ground: The power of professional learning communities*, Chapter 8, 155–176. Bloomington, IN: Solution Tree.
- Spillane, J. P. (2005, Winter). Distributed leadership. *The Educational Forum*, 69, 141–148. [[Taylor & Francis Online](#)]
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies*, 36(1), 3–34. [[Taylor & Francis Online](#)], [[Web of Science @](#)]
- Stiggins, R. (2005). Assessment for learning: Building a culture of confident learners. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On Common ground: The power of professional learning communities*, Chapter 4, 65–84. Bloomington, IN: Solution Tree.
- Stiggins, R. 2007. *Introduction to student-involved classroom assessment* (5th ed.). Columbus, OH: Pearson Prentice Hall.
- Stiggins, R. (2014). *Revolutionize assessment: Empower students, inspire learning*. Thousand Oaks, CA: Corwin.
- Stiggins, R. J., & Bridgeford, N. J. (1985). The ecology of classroom assessment. *Journal of Educational Measurement*, 22, 271–286. [[CrossRef](#)], [[Web of Science @](#)]
- Swaffield, S. (2013, October). Support and challenge for school leaders: Headteachers' perceptions of school improvement partners. *Educational Management Administration & Leadership*, 1–16. doi: 10.1177/1741143213494884. [[CrossRef](#)]
- Swaffield, S. (2014, April). *Multi-level leadership of assessment for learning and the potential of Critical Friendship*. Presentation to Canadian Symposium on Assessment for Learning, Fredericton, NB. Available at: <http://assessment4learning.com/delegates/swaffield-sue>
- Timperley, H. (2005). Distributed leadership: Developing theory from practice. *Journal of Curriculum Studies*, 37(4), 395–420. [[Taylor & Francis Online](#)], [[Web of Science @](#)]
- Townsend, D., Adams, P., & White, R. (2010). *Successful assessment for learning projects from AISI Cycle 3*. Edmonton: Alberta Education.
- Willis, J., & Adie, L. (2013). Negotiating the meaning of achievement standards in the Australian curriculum. *Curriculum Perspectives*, 33(1), 52–62.
- Wiliam, D. (2010). An integrative summary of the research literature and implications for a new theory of formative assessment. In H. L. Andrade & G. J. Cizek (Eds.), *Handbook of formative assessment* (pp. 18–40). New York, NY: Taylor & Francis.

---

**Reference:** Davies, A., Busick, K., Herbst, S. & Sherman, A. (2014). System leaders using assessment for learning as both the change and the change process: developing theory from practice. *Curriculum Journal*, DOI: 10.1080/09585176.2014.964276.

**Note:** This is an Accepted Manuscript of an article published by Taylor & Francis in *THE CURRICULUM JOURNAL* on October 30, 2014, available online: <http://www.tandfonline.com/> DOI: 10.1080/09585176.2014.964276.