Edification of Education: An Illumination of Best Practices, Effectiveness and Improvement

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ABSTRACT: The following iterative review of literature culls together research that addresses the terms school improvement, school effectiveness and best practices in a manner that provokes thought and leads the reader into the grey areas of educational effectiveness. This review is set within many landscapes as studies originating from many countries are loosely tied together to advance several lines of thought concerning teacher praxes, accountability and educational outputs. As an endpoint the reader is placed within the suppositions that walkthroughs, mentoring, professional development and accountability are actually related and necessary if we are to improve educational capacity, outcomes and educational effectiveness via best practices.

Keywords: best practices, effectiveness, educational improvement

RESUMÉ: Cette revue itérative de littérature comprend la recherche qui examine les sujets de l'amélioration des écoles, l'efficacité des écoles et les pratiques exemplaires pour inciter à la réflexion et pour mener le lecteur à explorer la zone grise de l'efficacité de l'éducation. Nous relions de façon relativement lâche des études originaires de plusieurs pays pour enfin proposer quelques idées concernant le praxis des professeurs, la comptabilité et les résultats de l'éducation. En fin de compte, nous proposons que les processus, le mentorat, le développement professionnel et la comptabilité sont tous liés et nécessaires à notre but d'améliorer la capacité éducationnelle, les résultats et l'efficacité par moyen des pratiques exemplaires.

Mots clés : pratiques exemplaires, efficacité, améliorer l'éducation

In education the need to reform, evaluate and refine all aspects of education is obvious, indeed, "most countries, among them those at the top of the international educational rankings, are reforming their education systems to provide their citizens with knowledge and skills that enable them to engage actively in democratic societies and dynamic, knowledge–based economies" (Sahlberg, 2009). What is remarkable is that Finland, a top-ranked education system,

> invests 30 times more funds in the professional development of teachers and administrators than in evaluating the performance of students and schools, including testing. In testing-intensive education systems, this ratio is the opposite, with the majority of funding going to evaluation and standardized testing (Sahlberg, 2012, p, 29).

Canada is one of those testing-intensive education regions and admittedly "the costs of standardized assessments are disproportionate to their value and . . . . In some countries, such as Finland, national tests are at a minimum but performance in international tests is outstanding" (Hargreaves, 2010, p.12). This re-emphasis on professional development is something educators have been requesting for many years (Ryan & Soehner, 2011). This may be due to one culturally associated actuality, which suggests,

> High-stakes accountability will only motivate a small percentage of teachers and, even if motivated, only a minority will know what changes to make in instruction to get better results . . . The right drivers – capacity building, group work, instruction, and systemic solutions – are effective because they work directly on changing the culture of school systems. (Fullan, 2011a, pp. 5-9)

What is hopeful in Ontario is that current developmental reforms (capacity building) do embrace the constructivist theory of John Dewey and the Competency Model by Gonczi & Hager (Ultanir, 2012; Gonczi & Hager, 2010). Dewey, a well-known theorist and education philosopher has caused many such as, Glassersfeld (1995) to advise; "knowledge is not passively received but built upon by the cognizing subject" (as cited in Ultanir, 2012, p. 196). Therefore, constructivism places great emphasis upon the learning process (group work); "knowing as a process [and less attention on the end product] rather than knowledge as a product" (Ultanir, 2012, pp. 196-197). Dewey believes that a true education is achieved through active experiences, which emphasize worldviews and experiences, which are critical components of problem solving (Ultanir, 2012) within a review process. Indeed, "reforms have

provided a multifaceted 'imagined' horizon rather than a single standard of success it seems" (Ryan & Joong, 2013, p. 26) where both the quantitative and qualitative sources of information are valued. Yet, reflecting upon reviews completed globally to this point in time " . . . most focused on: supporting disadvantaged children and early childhood care; reforming vocational education systems and building links with employers; improving training and professional development for teachers; and strengthening school evaluation and assessment" (The Education World Forum, 2015, p. 1). Ontario developmental reviews are in line with efforts worldwide to reform education via a developmental process (systemic solution) that is naturalistic, measured and mindful of current realities in society.

Statement of the problem

Given the notion that all stakeholders (leaders, teachers, supervisors, principals, superintendents) can play equal roles in school improvement by employing best practices; improvement becomes diverse and elusive. We need a shared understanding of best practices, effectiveness and improvement to move forward in any system, district or school board, and acknowledge that pedagogy is only one element within a larger landscape of educational improvement. Research suggests that there is a need to link and clarify strategic words, terms and phrases used in the current era of accountability globally.

Method

This integrative review (Cooper, 2001) of literature developed via access to online University library resources including: ERIC, British Library Direct, Academic Search Elite, Libris, Questia, High Beam. In addition journal sources such as Emerald, Sage, and Science Direct were utilized. Google Scholar permitted access to *grey* materials. Data were ordered into themes and descriptors such as, "best practices", "school effectiveness", "school improvement", "professional development", "educational technology and school improvement" were employed.

Selection criteria

Best Practices, Effectiveness and Improvement were a centre-point however beyond these parameters related research was considered which demonstrated accountability measure in an effort to unearth school effectiveness data. Tapering scope required key descriptors

noted above to realize 339 studies relevant to the foci. The iterative process (Cooper, 1982; 1989) involved recursive appraisal of studies, impact factor consideration and notation of journal quality metrics. An effort was made to limit research within the last 10 years resulting in 77 articles. To be clear,

> the role of iteration, not as a repetitive mechanical task but as a deeply reflexive process, is key to sparking insight and developing meaning. Reflexive iteration is at the heart of visiting and revisiting the data and connecting them with emerging insights, progressively leading to refined focus and understandings. (Srivastava & Hopwood, 2009, p. 77)

Review of Literature

The Ontario Ministry of Education (2013) suggests certain "evidence-based indicators of successful practice [can be located] in . . . effective schools. The indicators . . . assist educators in building coherence and aligning practices across an entire school (p.1). Herein, some of these indicators: best practices (teaching, learning, leading, planning), effectiveness (leadership at all levels) and improvement (pathfinding within all roles) in education are presented.

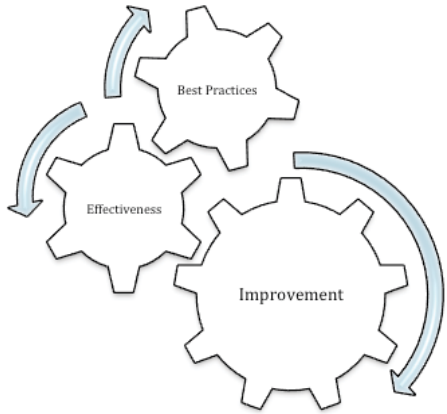

Figure 1. The interconnecting nature of Best Practices, Effectiveness and Improvement

Best Practices

Practice is understood via the term praxis, used as a noun, it has dual meanings (Ryan, 2013a). Praxis can include practical application or the exercise of a branch of learning (Kemmis, 2011) secondly; praxes could specify established practice, as in a classroom. The plural form of praxis is praxes; it is used to indicate several branches of learning or established practices and customs often located in educational systems (Ryan, 2013a). The practices of teaching (praxes of teaching) can and has been observed, examined and improved for many years (effectively transformed). Teaching praxes regularly unfolds in a planned and deliberate manner (Ryan & Joong, 2013) within classrooms. Praxes can be enhanced and often a specific practice that yields best results can be labelled a best practice (praxes) as long as they are practices that already possess a high level of widely agreed effectiveness (Hargreaves & Fullan, 2012, p.16).

In order to observe and identify best practices (praxes) in action there need be observers, evaluators and mentors (Tyler, Taylor, Kane, & Wooten, 2010). To observe and possibly appraise best practices, Looney (2011) endorses teacher evaluations via multiple measurements (observations) that yield a clearer sense of teacher practice (praxis). Multiple observations over time make it easier to detect relationships with students and communication patterns that lead to achievement (Grissom, Loeb & Master, 2013; Looney, 2011) while frequently identifying best practices (Hargreaves & Fullan, 2012). Observers and practicing teachers also need to recognize how "praxis involves critical reflection and contemplation of one's actions and us[es] reflections to inform practice" (Gilpin, 2007, p. 2). However, educational language can cause misunderstanding and require a great deal of probing via clarifying questions of self and others to realize meaning (Ryan, 2013b). Eventually, meaning becomes clearer, shared, understood, and leads to deep reflection and communal best praxes (Ryan, 2013b).

A recent Buffalo (New York State) Public Schools system review by Cross & Joftus (2013) concluded, after 200 classroom visitations in 29 schools, that ". . . few best practices were regularly observed in classrooms; data indicate that the instructional rigor in BPS needs to be ratcheted up. Teachers need more training on, and support for high-impact strategies to improve the effectiveness of their instruction" (p. 4). Cross & Joftus (2013) add,

> change management best practice suggests that large transformation projects establish success early to build momentum for ongoing change. The proposed strategic talent management plan should include concurrent project work streams addressing the key levers . . . These work streams allow more opportunities for the district to demonstrate success, with specific wins identified, achieved, and communicated early in the process. Quick wins should touch on each major stakeholder in the process, including HR staff, teachers, principals, and leadership. Possible quick-win opportunities include: • Training for current HR staff • Implementation of employee self-service • Incentives for hard-to-staff positions • Designated support staff for principals in an early version of a call center. (p. 68)

The need for a quick win in any process can instil long-term life. The best way to win quickly is to provide support, PD and incentives that reach all stakeholders. The process is communal and requires attention to detail and frequent contact.

Best Practices: The Walkthrough

To aid in communal development of best practices the *walkthrough* has become a necessary device to identify, promote and make public, classroom best practices (DeBoer & Hinojosa, 2012; Stephens, 2011). A walkthrough can be understood as a three to five minute structured review by a principal or designate to realize and illuminate teacher efficacy (DeBoer & Hinojosa, 2012; Downey, et al., 2004). Ginsberg and Murphy (2002) put forward a number of necessary steps to utilize walkthroughs; the notion of including other teachers as designates (partners) which supports Knight's (2011) belief that "when we give up our top-down power and adopt a partnership approach to interaction, we replace the empty power we get by virtue of our position with the authentic power gained through choice" (p. 20). Effective classroom walkthroughs include informal communication (feedback/ coaching), observation of classroom activities, focused *look-fors* that focus on improvement and are not intended as formal teacher evaluation device; instead it is a means to enhance student achievement (Kachur, Stout & Edwards, 2009, p. 3). The walkthrough is a partnership where coaching is prominent and admittedly, "equality is a necessary condition of any partnership. In true partnerships, one partner does not tell the other what to do; both partners share ideas and make decisions together as equals" (Knight, 2011, p. 2). Stephens (2011) suggests the learning walk is a means to ensure instruction changes using evidence based

teaching as a tool within the lesson study (Japanese origin), coaching, and Walkthroughs. These three modes share a common point, partnership. An effective classroom walkthrough requires:

- components that are informal and brief;
- involving the principal and/or other administrators, other instructional leaders, and teachers;
- quick snapshots of classroom activities (particularly instructional and curricular practices);
- not intended for formal teacher evaluation purposes;
- focused on look-fors that emphasize improvement in teaching and learning;
- an opportunity to give feedback to teachers for reflection on their practice;
- having the improvement of student achievement as its ultimate goal.

(Kachur, Stout & Edwards, 2009 , p. 3)

Grissom, Loeb and Master (2013) completed a longitudinal study and found that time invested in coaching teachers about their own instructional practice and evaluating teachers and curriculum realized greater school effectiveness (p. 12). The walkthrough is an investment and a literal pathway to improved instruction and increased student achievement, which Colvin and Johnson (2007) found to be correlational. The walkthrough can be made more efficient (communications) by using a digital application uploaded to a smart phone or tablet. The following table details briefly, jurisdictions where the walkthrough, or a version of the same, is geographically located and how it may be understood.

Jurisdiction	Name of Framework	Summary & Link
Massachusetts Department of Elementary and Secondary Education	Learning Walkthrough Implementation Guide	This Implementation Guide supports instructional leaders as they establish the Walkthrough process Districts are encouraged to build on this guidance, using data and self-reflection to customize the approach to meet local needs and improve teaching and learning. http://www.doe.mass.edu/apa/dart/walk/ImplementationGuide.pdf
Parma City School District (Ohio)	Walkthrough template	This is a walkthrough template that the Parma City School District in Ohio uses. http://www.parmacityschools.org/Page/1516
Hamilton Wentworth DSB	Best Practices in Walk-Throughs	This research summary includes key research findings about walk-throughs (2009). http://www.hwdsb.on.ca/e-best/files/2011/03/Best-Practices-in-Walk-Throughs-the-impact-on-student-ach.pdf
School District of Philadelphia	Walkthrough Framework	Walk through framework for the School District of Philadelphiahttp://webgui.phila.k12.pa.us/offices/e/empowerment-school-support/school-operational-support/the-walkthrough-framework
La Grange Area Department of Special Education (Illinois)	Classroom Walkthroughs to Improve School Operations	A detailed presentation of a learning walk workshop offered to the department. http://www.ladse.org/wp-content/uploads/2013/01/AA-Walkthrough-9-151.pdf

Table 1. Walkthrough Resources

The incorporation of walkthroughs is one option on the path to improvement in classrooms, schools, and systems (districts/divisions) (Cervone & Martinez-Miller, 2007; DeBoer & Hinojosa, 2012). The walkthrough is a means of teacher development and can be utilized as a collegial tool by administration or designates to walkthrough either individually or within a group (team) embracing partnerships (Fullan, 2015). The

option to designate another teacher leads to a teacher-to-teacher walkthrough approach, which mimics praxes in top-performing nations such as Finland and Singapore. Top nations have invested time and money into teacher development (Barnett, 2015) and leadership quality by creating policies and programs to ensure that practitioners can learn from each other and spread their expertise (DeBoer & Hinojosa, 2012; Darling-Hammond, 2014). The key with any investment is to ensure the investor is well informed, current and ethically aware.

Scott (2012) investigated four Kansas (U.S.A.) school district elementary schools and determined that the data realized could be used to improve the effectiveness of the school and teachers however stakeholders stagnated at points during the implementation process due to inconsistent sense of purpose, desperate visioning, communication issues, educational policy interference, and lack of agreement on the number of walkthroughs needed prior to engaging in the dialogue. Admittedly any undertaking can become confusing for participants and communication challenges surface daily in all schools (systemically), still there were positives to be found causing Scott (2012) to conclude:

> The research supports the concept that conducting classroom walkthroughs leads to: increased student learning, instruction of higher quality, and more effective professional development. School principals must continue to monitor the use of research-based instructional strategies and the effectiveness of prior job-embedded professional development. The classroom walkthrough process provides a means to do both in schools where increased student learning is the ultimate goal. (p. 125)

These conclusive statements are helpful building on Knight's (2011) position that, "professional growth comes from reflecting on what you're learning. When professionals are told what to do - and when and how to do it, with no room for their own individual thought - there's a good chance they're not learning at all" (p. 12). The hierarchy can stay in place but those placed in various positions need to partner and work outside the hierarchy. A 2015 article in *Canada Education,* Fullan admits something many teachers already know: "Top-down leadership doesn't last even if you get a lot of the pieces right, because it is too difficult to get, and especially to sustain, wide-spread buy-in from the bottom" (p. 24). The need for partnerships, coaching, communal work and improvement can begin with the walkthrough resources located below.

Source	Abstract/Summary
Walker, K. (2005). Walkthroughs. Research Brief. *Education Partnerships, Inc.*	Surveys of teachers and principals (creating a positive school climate) suggested the need to 1. treat students and teachers fairly and equally 2. communicate with students and teachers 3. support students and teachers 4. model caring behaviors 5. be visible and available 6. lead learning 7. focus on teaching and learning 8. create opportunities for professional learning
Payne, E. T. (2010). Implementing Walkthroughs: One School's Journey.	This mixed methods case study describes one middle school's journey with walkthroughs. Classroom walkthroughs work best in school climates that have an established level of trust between administrators and teachers. Walkthroughs, with classroom observations led by all teachers in the school, allow teachers to engage in professional dialogue.
Cunningham, A. R. (2012). *Classroom Walkthroughs at Two Suburban High Schools: Gathering Data to Improve Instructional Practice* (Doctoral dissertation, Arizona State University).	How walkthroughs operate in practice and how they were experienced by school administration, teacher leaders, and teachers at two schools within the same suburban district. Interviews illustrated that experiences were varied using the classroom walkthrough protocol. Continued professional development needed to occur with administrators and teachers. There was confusion with teachers as to the vision, purpose, and goals of using classroom walkthroughs. Changes in leadership during the five years since implementation and young administrators, who were relatively new in their positions, helped shape school experiences.

Table 2. Additional Walkthrough Resources

Best Practices: Technology

Technology is a commonplace word in education and one that needs to be included as emerges as a tool in many best practices with online communities and networks allowing (http://www.uft.org/linking-learning/online-teacher-communities)

for instantaneous professional development (PD) opportunities for educators and administrators. Time, Pace, access, and quality dictate frequency of use however; online PD opportunity presents an authentic alternative for the sequestered educator who may not be able to find time to professionally develop in a traditional manner. Even the walkthrough can be made more efficient by using a digital application for walkthroughs that can be uploaded to any smart phone or tablet. Researchers Fong and James (2015) highlight just a few

> . . . sources of professional development [which] can be found by following Twitter hashtags relevant to the topic of digital literacy. There is also a widget where the @bcdiglit Twitter feed can be constantly streamed and updated, with a "follow" button to encourage readers to connect. Two sources of professional learning can be found through the Commonsense educator's network and through Google's curriculum. (p. 1)

For an example of online PD see http://bcdiglit.wix.com/bcdiglit#!pro-d/cj3b. Some may argue that technology is a means to escape the bureaucratic scholastic jungle to get quick answers, reduce isolation, and locate professional development online. Online teacher communities of practice "are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2014). Indeed, we "are in a time where students are teaching teachers about emerging tools, while teachers are trying to teach the students about the bigger picture. Some view technology as a hindrance, not a tool" (Fong & James, 2015, p. 5). However, technology via online communication is a daily reality for our students and educators hence all educators need to become digital citizens, informed and guided within this digital environment. As a best practice educators can turn to local guidelines or research based positions such as Ribble's (2012) digital citizenship landscape statement:

1. Digital Access: full electronic participation in society – allowing all technology users to participate fully in a digital society if they choose.
2. Digital Commerce: electronic buying and selling of goods – providing the knowledge and protection to buy and sell in a digital world.
3. Digital Communication: electronic exchange of information – understanding the options of the digital communication methods and when they are appropriate.

4. Digital Literacy: process of teaching and learning about technology and the use of technology – learning about and teaching others how to use digital technologies appropriately.
5. Digital Etiquette: electronic standards of conduct or procedure – being considerate of others when using digital technologies.
6. Digital Law: electronic responsibility for actions and deeds – having an awareness of laws (rules, policies) that govern the use of digital technologies.
7. Digital Rights and Responsibilities: those requirements and freedoms extended to everyone in a digital world – protecting the digital rights of others while defending individual rights.
8. Digital Health and Wellness: physical and psychological well-being in a digital technology world – understanding the risks (both physically and psychologically) that may accompany the use of digital technologies.
9. Digital Security (self-protection): electronic precautions to guarantee safety – protecting personal information while taking precautions to protect others; data as well. (p. 150)

Again, today, and in the immediate future, all teachers need to be digitally literate, and become digital citizens to leverage best practices in teaching (Fong & James, 2015, p. 5). The international (ISTE) standards for Teachers (2008) suggest educators must participate in digital literacy and become digital citizens. There are also ISTE Standards for administrators (2009) See: http://www.iste.org/standards/ISTE-standards/standards-for-administrators and within Canada http://www.c21canada.org/wp-content/uploads/2012/05/C21-Canada-Shifting-Version-2.0.pdf Also see ISTE Standards for students (2007) http://www.iste.org/standards/ISTE-standards/standards-for-students

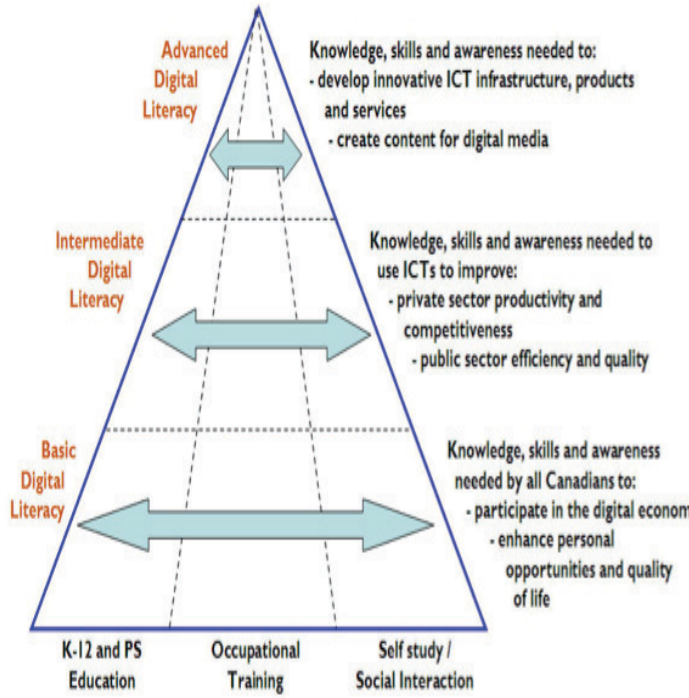

Figure 2. A Digital Literacy Perspective on Digital Economy Skills Challenges – Used with permission from © 2016 MediaSmarts, Ottawa, Canada, Digital Literacy in Canada: From Inclusion to Transformation, http://www.mediasmarts.ca, reprinted with permission. Retrieved from http://mediasmarts.ca/sites/mediasmarts/files/pdfs/publication-report/full/digitalliteracypaper.pdf (p.8).

In the Winter (2015) Elementary Teachers Federation of Ontario *VOICE* publication is the newly developed: *Think, Respect, and Thrive Online* resource which is a review of a fresh digital citizenship resource for Ontario elementary teachers and students which will quickly become a necessary element of best practices in both in-service and pre-service education.

Effectiveness

From the onset there are several logical tenets worthy of consideration and debate for example: “The quality of an education system cannot exceed the quality of its teachers” (Barber &

Mourshed, 2007, p. 40). The same researchers suggest, "the only way to improve outcomes is to improve instruction" (p.40), and, "achieving universal high outcomes is only possible by putting in place mechanisms to ensure that schools deliver high-quality instruction to every child" (p. 40). Accepting these views the logical next step is to develop a system to oversee mechanisms and focus on instruction and teachers who are the front line people who can change student outcomes directly and daily (Starrett, 2015). The challenges are obvious. The correct oversight mechanism(s) and the people implementing the oversight need to be doing this effectively and teachers need to be coached, involved and partners in this effectiveness quest. The need to identify effective pedagogy is the next hurdle; a target if you will.

Researchers such as Westbrook, et al. (2013) have ". . . conceptualised 'effective' pedagogy as those teaching and learning activities which make some observable change in students, leading to greater engagement and understanding and/or a measureable impact on student learning" (p. 8). The term effectiveness requires context such as assessment, pedagogy or leadership to make the abstract notion of effective *something* concrete, less tacit and tangible hence the need to link effectiveness with a context such as teaching. Indeed, the notion of making some observable change in students, leading to greater engagement and understanding and/or a measureable impact on students, is an important underpinning of effectiveness in any educational context. Starrett (2015) adds, "an effective teacher provides students with positive outcomes-both socially and academically" (p. 31).

Take for instance the ongoing review of educational praxes and substantive feedback concerning professional practice which has a key position within school effectiveness/improvement research with numerous organization centred studies suggesting it is critical within school improvement schemes (Higham & Hopkins, 2011). Several school level investigations of teacher quality improvement noted feedback and analysis fundamental to improvement (Hattie, 2012). Burgess (2014) determined, that "teacher effectiveness is consistently recognised as the major within-school influence in student learning, [yet] exact estimates of teacher effectiveness are difficult to ascertain" (p. 43). As is customary in any research recommendations there is always a need for clearer expectations about the role and responsibility of the school board and each employee (Grandson, Chisum, Cross, & Geiser, 2014, p. 58). One important observation in research concerning school improvement:

> When data [are] . . . used as part of an ongoing improvement cycle that involves regular collection and systematic analysis of evidence, teachers can change their instructional practice to improve student achievement. To achieve this goal, the school leader must share leadership with teachers in leading a school wide improvement process, and central office must prioritize developing principals' instructional leadership skills. (Thessin, 2015, p. 73)

The oversight mechanism and the overseers need to be effective leaders. Effective *leadership* cannot and should not be overlooked in any attempt to improve effectiveness, leading Mulford (2013) to conclude; "effective principals influence student outcomes indirectly through teachers' work with students in their classrooms and school" (p. 26). This is also a conclusion of an Ontario study completed by Ryan and Soehner in 2011. Current research proposes that Administrators need to be *instructional leaders*, focus on professional development, monitor and assess the teaching process and create a positive school climate (Gulcan, 2012). These are not impossible tasks however, in some schools if partnerships (delegation/designation) and communities of practice (coaching/capital) are '*wanting*' then these missing rudimentary elements can overwhelm leadership (Masters, 2014). Perhaps this is why Horng & Loeb (2010) insist; instructional leadership must include broader personnel practices and resource allocation practices (p. 33). Marzano, Frontier, and Livingston (2011) add, "the purpose of supervision should be the enhancement of teacher's pedagogical skills, with the ultimate goal of enhancing student achievement" (p. 2). This is not really new information however it needs to echo *again and again* as new school administrators are introduced and experienced administration needs reminders to refocus.

Since the late 90's it has been understood that "teacher effectiveness, and ultimately student performance, will improve when administrators spend more time observing, coaching and conferencing with teachers (Frase, Downey & Canciamilla, 1999). It could be purely a logistical question for administrators concerning time, place and space to do this or it may be more a matter of deciding what type of leadership suits our current needs? Harris (2008) proposed distributed leadership, which suggests leadership is neither an event nor individual (singular), leadership results from multiple interactions at different places in an organisation (p.33). While it is true that the type of leadership needs to suit a particular context within each unique learning institution, leadership adaptability is a strategic construct. Hargreaves and Fullan (2012) add:

> Continuous professional development pays off in Finland, Singapore, Alberta, and Ontario. The best way you can support and motivate teachers is to create the conditions where they can be effective day after day, together. And this isn't just about intraschool collaboration. It's about interschool and interdistrict collaboration. It's about the whole profession. (p.37)

An educator can always get better by investing time in PD. Building teacher professional capital can be understood creating a school of effective teachers. It does not mean providing financial incentives since,

> paying teachers to improve student performance did not lead to increases in student achievement and did not change what teachers did in their classrooms'. And as well as being of questionable effectiveness, incentive schemes often result in unintended and undesirable behaviours on the part of teachers and schools. (Masters, 2014, p. 8)

Investment can be in terms of time, attention, programming, support, coaching, partnering, research efforts and the like to realize high-quality teachers and teaching that builds teacher professional capital within the district, region or province (Grissom, Loeb & Master, 2013; Hargreaves & Fullan, 2012). Using only financial incentives with an accountability framework (standardized testing) can lead to the "narrowing of the school curriculum, to withholding less able students from testing, to providing inappropriate assistance to students during tests" (Masters, 2014, p. 6). Instead, building quality (effective teaching) is the best means towards a major positive influence in student learning improvement. This is more than ability grouping (Hattie, 2009; Slavin, 1990); class sizes (Hattie, 2009); or funding (Barber & Mourshed, 2007). Indeed, despite some studies linking improved teacher effectiveness and student learning with schools organised around professional learning communities (Leithwood & Strauss, 2008), the reality of establishing collaborative teacher learning is complex (Louis, Dretzke et al., 2010) and not easily achieved within the current timetable challenges.

Croft, Coggshall, Dolan, Powers & Killion (2010) have culled together professional development modes such as, "action research; case discussions; coaching; critical friends; data teams/assessment development; examining student work/tuning protocol; implementing individual professional growth/learning plans; lesson study; mentoring; portfolios; professional learning communities; and study groups" (pp. 6-7) to name but a few. While action research enjoyed some popularity in Ontario during

the late 1990's and early 2000's it has had to complete with data-driven decision making, PLC's and the like over the past 15 years in Ontario. Each PD mode can be uncovered somewhere in Ontario, to some extent, however the PD activity most often is due to the individual teachers effort to professional develop and is not a system wide PD effort overseen by instructional leaders such as Principals. Principals may believe instructional leadership is of value, leading to higher levels of teacher effectiveness and student learning, yet the demands of school leadership upon time and professional isolation, often inhibit its enactment (Mulford, 2013). Nevertheless, Kalule & Bouchamma (2013) advise that the importance of providing teachers with the opportunity to reflect on strengths and weaknesses via guided questioning by a skilled instructional leader is perhaps the best investment a school district can make.

Iachini, Pitner, Morgan, and Rhodes (2016) recently completed a mixed-methods case study to elicit principals' perspectives on teacher and school staff needs, and student needs. Iachini et al. attempted to uncover whether these perspectives are reflective of priorities emphasized in current expanded school improvement models, such as mental health, family engagement, out-of-school time opportunities, and other youth development and learning supports. Twenty school principals from a school district participated in the online survey and a follow-up phone interview. The study found that the three utmost teacher and school staff needs reported by principals were health and mental health (85.7 per- cent), support with families (71.5 percent), and training or information about student behavioral and mental health (70.0 percent). Certainly any new model must consider the health of the people in any system. Iachnini et al. state that there are few studies that elicit the principals' voices to uncover their perspectives about what contributes to improving our schools.

Improvement

The research herein makes use of a definition of *improving schools* provided by Day et al. (2009) in their study of successful school leadership which states: [improving schools] "are places where there is demonstrated and sustained student achievement gains over a number of years. Over time, this improvement suggests sustained improvement of practice within a school" (p. 6). However, any mention of school improvement (Hargreaves, 1995) must be linked to capacity building in education and governance which plays a critical role in any effort to improve (Grandson, Chisum, Cross, & Geiser, 2014, p. 58). Researchers, Bryk,

Sebring, Allensworth & Luppescu (2010) emphasize the importance of a shared vision, goals and values clarification as a means to improve schools. To realize a shared vision, goals and values in any school require professional learning of self and others. Fullan and Knight (2011) found schools that substantially improved "focused 78% of their interventions on professional learning" (p. 22). In addition, improvement can be sustained if it is guided by the refined beliefs of active researchers who have determined " . . . the process of supervision can be instrumental in producing incremental gains in teacher expertise; which can produce incremental gains in student achievement" (Marzano, Frontier & Livingston, 2011, p. 3). While the development of teacher expertise (teacher capital) is desired, so too is the need for students to improve their own achievement; it is a dual vision. School administrators must lead academic improvements for all students (Chenoweth & Theokas, 2011). In doing so leadership must embrace supervision and set out to improve teachers by providing occasions for educators to be learners (Mulford, 2013).

Glickman, Gordon, and Ross-Gordon (2010) describe the term *supervision* as a common vision,"that is developed collaboratively and brought into reality together. It forms connections that focus organizational and individual goals, objectives and efforts into an overarching strategy" (p. 56). The supervisor is someone who assists, guides, directs, and oversees the people that he/she is managing, however there is much more to being a supervisor than simply overseeing the jobs that people are doing (Langton, Robbins, & Judge, 2011). The supervisor is a leader of improvement and a builder of capacity which is erected into the system as the supervisor reassures all to reach their full potential, and helps to develop interpersonal relationships and a productive organizational culture (Dessler, Munro, & Cole, 2011). Of interest is the somewhat recent work of Marzano and Waters (2009) whose meta-analysis of " . . . studies involving district leadership (or variables related to district leadership) and student academic achievement in the United States from 1970 until 2005" [found] a correlation between district leadership or district leadership variables and student academic achievement" (p. 12). The quality of superintendent leadership does, and can improve student achievement (Marzano & Waters, 2009, p. 5). Thus researchers suggest there is a positive correlation between effective school district leadership and leadership development as a strategy for improvement of academic outcomes (Grandson, et al., 2014, p. 58).

Indeed, ". . . successful countries treat their teachers as nation builders, and how they come to yield high returns in prosperity, social cohesion, and social justice" (Hargreaves & Fullan, 2012, p. 185). Looking to yield high returns in education is not something unfeasible as leading countries (Finland, Singapore) have demonstrated, what is required is identification and means to achieve high returns by following a path of improvement within our Canadian context. One such opportunity can be observed within *mentoring* which can increase teacher retention, satisfaction, and student achievement (Ingersoll & Strong, 2011)**.** Mentoring has also, according to Beltman, Mansfield and Price (2011) been able to diminish feelings of isolation when the mentor is positive, pro-social, professional, and from the same teaching area. Another alternative to reduce isolation and increase the possibility of mentoring is Co-teaching. Loertscher & Koechlin (2015) recommend two approaches that may offer school improvement and promote participation within the school " . . . culture that aims for excellence: the first is the transformation of the school library into a learning commons, and the second is the strategy of co-teaching between school specialists and classroom teachers . . . . where everyone participates as a teacher and as a learner" (p. 12). Historically, we have seen open-concept teaching and team-teaching in larger rooms (pods) however these trends may work with one class and not the other given the partners teaching and ultimately the cost to fund such a strategy may eliminate this in the planning stages. Nonetheless, this may indeed work in some schools and in some situations and is worthy of mention.

Stakeholders (leaders, teachers, supervisors, principals, superintendents) can play equal roles in school improvement by employing best practices espoused in current literatures. Improving teaching is really one element within a larger landscape of improvement as many research studies have suggested that there is a need to link ". . . curriculum (reforms) to teacher education and pedagogy (Dembélé and Lefoka, 2007, Pridmore, 2007, Bates, 2008, World Bank, 2008), as curriculum reforms are often designed and implemented without parallel reforms in initial teacher education and continuing professional development" (Westbrook, et al., 2013). Undoubtedly, school improvement is about change and it very analysis (Botha, 2010; Sun, Creemers & de Jong, 2007).

Summary

In sum, praxes can be enhanced and a specific practice yielding best results can be labelled a best practice (praxes), as long as they are practices that already possess a high level of widely agreed effectiveness (Hargreaves & Fullan, 2012, p.16). One current best practice is the *walkthrough,* a three to five minute structured review by a principal or designate to realize and illuminate teacher efficacy (Downey, et al., 2004). In addition to the walkthrough (coaching) educators will realize that "professional growth comes from reflecting on what you're learning. When professionals are told what to do - and when and how to do it, with no room for their own individual thought - there's a good chance they're not learning at all" (Knight, 2011, p. 12).

The notion of improving schools suggests improving "schools are places where there are demonstrated and sustained student achievement gains over a number of years. Over time, this improvement suggests sustained improvement of practice within a school" (Day et al. 2009). The measurement of achievement is necessary and most likely is best via both qualitative and quantitative (mixed) modes. However, any mention of school improvement (Hargreaves, 1995) must be linked to capacity building in education and governance which plays a critical role in any effort to improve (Grandson, Chisum, Cross, & Geiser, 2014, p. 58). The hierarchy can stay in place but those placed in various positions need to partner and work outside the hierarchy.

Stakeholders acknowledge that the digital realities continue to trickle into best practices, leadership, and effectiveness plans. One such example is the communities of practice which "are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2014). Indeed, we ". . . are in a time where students are teaching teachers about emerging tools, while teachers are trying to teach the students about the bigger picture. Some view technology as a hindrance, not a tool . . ." (Fong & James, 2015, p. 5). However, technology via online communication is a daily reality for our students and educators, hence all educators need be digital citizens, informed and guided within this digital environment via professional guidelines, policy and awareness (Wenger, 2014).

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