

Improving Student Learning: A review of key improvement messages

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Articles in this special edition have provided an insight into themes that inform the improving teaching agenda. This article condenses key messages therein to generate an insight--- an answer if you like--- into 'how to' engender, support and sustain ongoing teaching improvement. To that end this article explores four key and inert-related elements: embedding of a research culture; the power of collaboration; the use and role of professional dialogue and the importance of improving teaching in context.

Introduction

In recent years educational authorities across the globe have been paying increasing attention to improving the learning outcomes of *all* students in schools, or as it is more pointedly stated, getting schools to focus more on their core business of teaching and learning (Lynch and Smith, 2011; Lynch and Smith, 2002, 2006). While a noble aspiration, the achieving of the 'all students achieving' agenda is somewhat challenging.

Until the mid-1960s the general view was that schools made almost no difference to student achievement, which, so it was thought, was largely pre-determined by socio-economic status, family circumstances and innate ability (Coleman et al., 1966). It wasn't until recent times that comprehensive research studies began to refute this view (Hattie, 2009; Darling-Hammond, 2000; Marzano, et al 2000; Mangiante, 2011).

Hattie (2009), for example, conducted a meta-analysis covering over 50,000 education related studies. He found the major sources of variance in student achievement to be centred across 5 key elements:

1. The student: accounts for 50% of variance in student achievement
2. The student's home life: 5-10% of variance in student achievement
3. The School: 5-10% (principals, other leaders an influence) of variance in student achievement
4. The student's peers: 5-10% of variance in student achievement
5. The Teacher: 30% of variance in student achievement

Given the circumstance of what can be 'controlled' and 'influenced' by the school and which in turn has direct impacts on students, Hattie (2009, pp. 22 to 25) concludes the focus should be upon 'the teacher' and thus makes the point that *it is the teacher and what they do in classrooms that matters for each individual student*. This therefore implicates the principal to focus on the work quality of each teacher and in doing so develop an appropriate environment

and a set of school-wide strategies that engender, support and sustain ongoing teaching improvement.

The problem is that the traditional ‘teacher professional development’ model, where the teacher periodically withdraws from their classroom (and school) to attend ‘disconnected’ workshops (to their specific classroom circumstance) conducted by third party facilitators, proves ineffective (Vescio et al, 2008; Timperley et al, 2009; Taylor, et al, 2011; Roseler and Dentzau, 2011; Schleicher, 2012). With this point in mind the challenge for schools and those who lead them then, is what to focus upon and importantly how to effectively and sustainably improve each teacher’s teaching?

Articles to this point provide an insight into this question and in the following sections we condense key messages therein to generate an insight--- an answer if you like--- into ‘how to’ engender, support and sustain ongoing teaching improvement. Before continuing, we briefly provide a revision of preceding articles and their respective themes for key points of reference.

Dr Madden focused the need for a school culture that engenders a sense of professional freedom for the teacher to inquire and reflect on practice. *Following articles* case studied teacher lead collaborations and the associated professional dialogues to create a set of exemplars on how specific aspects of teaching can be focused on and improved. *Khantomani* offered parent support with a translation service. In the article written by Dr Hassan, the ‘data’ theme returns with an examination of how to monitor student improvement, while the technological aspect were the topics of *Dr Hastie et al. and Strydom*. Expanding the collaboration theme to parents, *Quinn* explored parental engagement as a support mechanism when seeking to remedy student learning gaps. Furthering the discussion on feedback was *Harb* as the use of digital portfolios was explored. *Macklin* examined a critical thinking strategy aimed at improving student organisational practices while *Jamal* demonstrates the hidden support provided by an overarching of health and safety on the learning program. *This article* provides an insight into a successful embodiment of all article themes by case studying a school-wide ‘Teacher as Researcher’ project at a Private School in Abu Dhabi, UAE¹.

What’s evident in such themes is that for whole of school teaching effects and improvements, the principal has to establish and facilitate each ‘theme’ within the school and then create opportunities for teachers to engage with each and to support them as they work to innovate on circumstances, solve problems and generally work to become a better teacher (Lynch, et al, 2015).

After an analysis of each article and their respective themes, four key and central themes emerge in the *improving teaching* agenda: (1) embedding of a research culture (2), the power of collaboration (3) the use and role of professional dialogue and (4) the importance of improving teaching in context.

In the next section of this article we explore these four themes in greater detail. We also draw on other published literature to expand on and reinforce key elements of each respective theme. While we detail each of these four ‘themes’ individually for clarity, we make the point that

¹ <http://alyasat-school.com/default.aspx>

each exists and relies on each other, in a coordinated and lead manner, for teaching improvement effect. Diagram 1 illustrates this point.

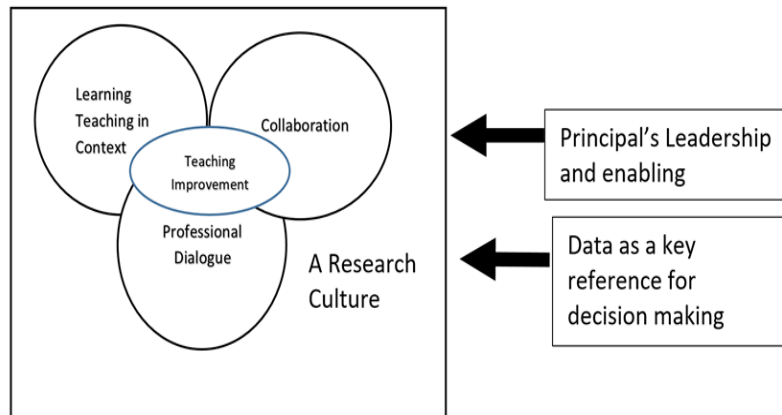


Diagram 1: The Inter-play and Relationship of key elements in Teacher Professional Learning regimes

We turn first to an embedding of a research culture.

Embedding of a Research Culture

When teachers think research, they often conjure up people in white coats, test tubes and the like and think of it as the business of scientists in research labs. While an aspect of research in the science field, the reality for research in an education sense is that it effectively means a critical engagement with 'evidence'. We can understand evidence as data that has been collected on student learning, the teacher's own teaching performance, results of satisfaction surveys and the like or a research paper that provides a detailed insight into a phenomenon that impacts or guides effectiveness in teaching practice.

A teaching-based research culture has two aspects. The first is an environment where teachers strategically collect and analyse their classroom data and then incorporate findings--- as standard practice-- into their teaching decisions. The second is the active engagement of research, by way of incorporating evidence-based practice--- the unpacking for local fit and/or the following of published research findings--- into their teaching plans and actions and by engaging with other teachers on same through conversations, reflections and joint projects.

In simple terms the actual process of 'teacher engagement with research' becomes embedded in the work of the teacher such that it is considered part of the overall teaching effect strategy (Lynch and Smith, 2004; 2006). At the heart of such embedding however is the need for a teacher professional learning regime that is both informative and supportive of teachers as they go about their day-to-day 'teaching' business and convenient to the busy schedules that classroom teaching demands. This implicates the Principal who has to engineer the school's organisational arrangements to enables such seamless activity. This often means revisiting priorities and rethinking those activities that have no strategic teaching improvement effect (Madden, 2012).

The Power of Collaboration

'Collaborative teacher approaches' are the antithesis of what can be termed 'the traditional approach' to classroom teaching. In the traditional classroom teaching world, a classroom teacher works in a single classroom environment--- solo as it were-- doing **their** teaching work.

While they may engage in teacher reflection with a view to improving their practice, the premise of collaboration is minimal and where it does exist, it is focused largely on whole school functions and events (Lynch, 2012, Madden, 2012). ‘Feedback’ of any kind is neither sort out nor is it well received when it is suggested, a reflection of the ‘private’ or ‘closed’ culture that exists in the traditional teacher approach (Baskerville & Goldbatt, 2009). The reasons for this circumstance are involved and beyond the scope of this article save to say, elements such as trust and professional dialogue are negated by the privatised nature of the one teacher, with a closed door in a single classroom situation (Costas & Kallick, 1993).

‘Collaborative teacher approaches’ can thus be described as teaching environments where the boundaries of teacher work have been challenged and thus redefined (Madden, Wilks, Maoiné, Loader, & Robinson, 2012). While the notion of teachers jointly teaching is not new, the premise of two or more educators taking joint responsibility for the planning, teaching, and monitoring of the success of a cohort of students (i.e. a complete year level and multi curriculum areas therein) as well as the teaching performance of each other, is new (Plinter, Iuzzini & Banks, 2011). In these arrangements, professional dialogue becomes a critical feature because it is through such processes that teachers begin to share ideas, harness capacities and experiences, take calculated risks, try something new; knowing all the time they will be supported and guided by their fellow teachers, and their principal, in their goals for teaching improvement. The additional capacity such arrangements represent is an added feature that encourages teachers to be involved.

Further, as Plinter et al (2011, p. 44) argue, “teachers when collaborating in such ways, develop:

1. an awareness and understanding of self in relation to socially constructed identities,
2. an awareness and understanding of self in relation to a collaborator’s socially constructed identities, and
3. a shared awareness and understanding developed by collaborating faculty of the potential impact of their identities and their students’ identities on the processes of teaching and learning”.

Taken together, teacher collaborative approaches expand the professional learning of teachers but also the potential for authentic student learning (Plinter et al, 2011; Cheng & Willie, 2013).

The Use and Role of Professional Dialogue

An adjunct of collaboration is the notion of Professional Dialogue. While the premise of ‘teacher reflection’, where the teacher questions their own practice with a view to think differently about their classroom practice (Fullan, 1999), has been described in the literature and evidenced in teacher behaviour over many years, there has been a movement in more recent times towards the use of ‘professional dialogue’ in teacher learning regimes. For clarification purposes, ‘professional dialogue’ differs from ‘teacher reflection’ in that while it involves teacher reflection, it incorporates a teaching colleague as participant. Further it is designed to “feature the depiction of practice and scrutiny of different approaches in a critical and attentive manner” (Cheng & Winnie, 2012, p.326).

Nelson et al. (2010), cited in Cheng and Winnie (2013, p 326), report that in professional dialogue processes “teachers have to go beyond simply sharing practice, and that they have to

emphasise investigating their practice in order to bring about positive changes to their teaching and pupils' learning". Research indicates that "there are good theoretical and empirical grounds to believe that *on-the-job participation* in reflective dialogue is an effective method for the professional development of teachers" (Kruiningen, 2013, p.110). While professional dialogue has similarities to that of a 'critical friend', a further difference is the incorporation of 'teacher collaboration' and a joint commitment on behalf of teachers in the arrangement to work together to effect change in each other's practice (Baskerville & Goldblatt, 2009). In effect the inter-play of a 'research culture', 'collaboration' and 'professional dialogue' become the vehicle through which teachers improve their teaching in context.

Improving Teaching in Context

According to researchers, such as Opfer & Pedder (2011) and Wayne, et al, (2008) professional learning developed to meet, for example, 'minimal teacher registration hours' and focused to systemic priorities --- the traditional approach --- is insufficient when collaboration and professional dialogue predominate the teacher culture. Opfer & Pedder (2011) go on to assert that "teacher learning must be conceptualized as a complex system rather than as an event" (2011, p.378). By this they suggest "one (has to) consider the sort of local knowledge, problems, routines and aspirations that shape or are shaped by individual practice" (2011, p.379) and thus design professional learning accordingly. Such teacher learnings must "recognize the overwhelmingly multicausal, multidimensional, and multicorrelational quality of teacher learning and its impact on instructional practices" (Opfer & Pedder, 2011, p. 394). In simple terms, once professional dialogue and collaboration come into play the 'learning content' for teachers needs to match their context. The processes of classroom-based research and teachers working on understanding and applying evidence-based practices is the central focus of such a regime.

To this point we have identified and highlighted what we consider are four key elements of a sustainable and effective process that facilitates and enables each teacher to focus on improving their teaching. We term a strategic amalgam of this embodiment the 'Teacher as Researcher'.

The Teacher as Researcher

Stringer (1999) offers an ecological lens to the type of research activity that the Teacher as Researcher premise employs. In short, he describes this type of activity as 'action research', which he says refers to a three-step method as explained:

1. **Look:** Gather information related to what is most valued to the goals or the work of the school.
2. **Think:** After identifying relevant assumptions and expectations, analyze/interpret this information to evaluate possible antecedents, cultural and theoretical assumptions, ideologies, influences, consequences and potential actions.
3. **Act:** This part of the cycle often involves posing new questions that lead to further inquiry. (Stringer, 1999)

Freebody (2003) argues action research is a 'deliberate' rather than a purely exploratory entry into a naturally occurring educational setting. That is, it is a planned and self-consciously focused examination of changing practice and has a number of components. For Freebody (2003), a key characteristic of action research is that it is a solution-oriented investigation aimed explicitly at understanding and solving particular problems rather than simply

documenting their instances, character or consequences. Freebody (2003) expands on Stringer's (1999) work by outlining a more detailed seven step action research process:

1. Selecting a focus
2. Collection of data
3. Analyse, document and review data
4. Develop analytical categories
5. Organise data and its interpretations
6. Take action and repeat cycle. (Freebody, 2003)

This action research type activity can either be conducted by a group or personally owned. However, the emphasis is on the importance of the researchers' role in defining the problem, what counts as solutions, and what form the reporting of the project will take.

The central component of this action research is the 'loop' factor (step 6). This takes the form of a series of iterations on and around the problem, its documentation and theorization, and the analyses that are used to display how it has been redefined and solved. For some, these iterations are referred to as spirals (Mills, 2000) but are more commonly known as the Action Research cycle. This cyclic feature of Action Research is taken to be central to its core emphasis on the documented improvement of practice.

Stringer (1999) elaborated on his "Look, Think, Act" model following a more qualitative interpretive research design as outlined in Figure 1.

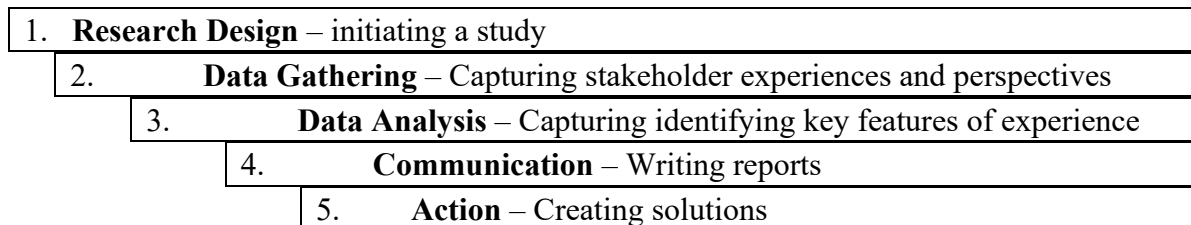


Figure 1: Stringer's Qualitative Interpretive Research Design

The 'trying out of ideas' (or creating solutions) is not undertaken solely for the purposes of re-theorizing educational practice, or adding to knowledge, but is also aimed at improving educational practice, at the moment it is needed. In that respect, action research is concerned as much with outcomes on the original research as it is with generalizations to other research or leading to theoretical refinement (Reason & Bradbury, 2006).

Action research is seen as a collaborative enterprise as it provides opportunities for colleagues to share, discuss and debate aspects of their practice with the aim of fostering school improvement and development. This involves responsible 'sense-making' or interpretation of data collected from within the field of researchers' own practice.

One way forward for the classroom teacher is to become an action researcher. Lawrence Stenhouse, in his book, "An Introduction to Curriculum Research and Development (1975) popularised the term "Teacher as Researcher". The purpose of Teacher as Researcher is simply to enhance their own (or that of their colleagues) teaching ability. It's a systematic reflection on their teaching practices with the sole aim of personal improvement.

For the teacher researcher, the purpose of school based research is fourfold:

- Address the gaps in the current knowledge by allowing teachers to investigate voids in their (own) teaching practice
- Expand the knowledge of teachers
- Test the knowledge already known about teaching and to apply it to new circumstances or with different participants.
- Add voices not yet heard to the research knowledge (Creswell, 2002)

In the mid to late '70s, 'Teacher as Researcher' was generally an individualized notion, looking at a teacher's practice as an isolated activity within the school, and even isolated from colleagues. However, today we see the focus of classroom research as part of the whole school and even, at times, at the system level. Teacher research captures children's learning and development using data that focuses on children's voices.

A consequence of teachers undertaking action research (inside their classroom) is that it becomes more meaningful (and personal) to the classroom practitioner, promotes the voice of the teacher and highlights their professional role. Teacher researchers become the creators of knowledge.

Schools are beginning to take an interest into this research as a means to inform their decision-making across many dimensions of school life. While school improvement remains the major basis for schools focusing on 'in school' research, other areas are becoming more prominent. These include workplace health and safety, physical learning environments and even issues around professional development.

The move away from university based research that guides the theory enacted in schools has been accentuated by the need for teachers to be more hands on in determining student learning needs (Babkie & Provost, 2004). When discussing teachers as researchers, the focus is not on an experimental approach to teaching, but rather a practical means to improving teaching and learning.

As no two classrooms are alike the need for the teacher to be able to tailor the curriculum to the needs of each student becomes more apparent. The teacher must be able to rely on his/her knowledge through careful systematic observation guided by an understanding of various hypotheses to each context faced.

Conclusion

In this article, we have explored four key and inter-related themes in the improving teaching agenda: (1) the embedding of a research culture, (2) the power of collaboration (3) the use and role of professional dialogue and (4) the importance of improving teaching in context. We conceptualised a 'how to' improve teaching strategy with these elements being central and located them collectively as the *Teacher as Researcher* premise.

So, what does this all mean for the teaching improvement agenda? A changing global world built on technological innovation has generated a complex series of agendas for schools and at an exceedingly fast pace. Governments of all persuasions are mandating that all students

succeed at school and this implicates teachers and their teaching practice for effect. The Teacher as Researcher premise effectively creates a framework for teachers to analyse what they do and a platform for them to generate a sustainable, effective and personalised professional learning regime. In simple terms the Teacher as Researcher premise is a vehicle for teachers to improve their teaching and the agenda for the school principal is to engineer a school-wide environment and arrangements therein that enable and sustain its being.

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