

2016

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### Recommended Citation

Ellis, N., & Loughland, T. (2016). The Challenges of Practitioner Research: A Comparative Study of Singapore and NSW. *Australian Journal of Teacher Education*, 41(2).

<http://dx.doi.org/10.14221/ajte.2016v41n2.8>

This Journal Article is posted at Research Online.

<http://ro.ecu.edu.au/ajte/vol41/iss2/8>

## The Challenges of Practitioner Research: A Comparative Study of Singapore and NSW

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*Abstract: Practitioner research is considered an integral form of professional learning for teachers but in its implementation it will often encounter significant challenges. This qualitative comparative case-study of teachers in Singapore and NSW investigated the range of challenges they encountered during their work as practitioner researchers. The study employs Schatzki's practice theory to analyse the impact of practitioner research on the existing practice architectures of schools. A total of 42 participants from NSW and Singapore were interviewed for this study. The results explicate the various challenges teachers encountered and how these act to prefigure and remodel practitioner research as a practice within each of the two different settings. The findings are of interest to teacher educators working with teachers across the career span who are considering using practitioner research in their professional learning repertoire.*

### Introduction

There is an assumption in teacher professional learning that teachers should adopt “a ‘researcherly’ disposition” (Lingard & Renshaw, 2010, p.27). That is, teachers can and should be both teachers and researchers. This position does not attract universal support. Professor John Hattie, chair of the influential AITSL board in Australia, was recently quoted as saying “I don’t have any time for making teachers researchers ... We have got no evidence that action researchers make any difference to the quality of teaching” (Stewart, 2015, para. 16). Hattie’s claim is one form of proof that action research (or practitioner research as it will be called in this paper) may not be suitable as a professional learning strategy for teachers. However, it does not give “an insight into how and why” it doesn’t work (Bakker & van Eerde, 2015, p.11). This study sheds some light on how and why practitioner research may be a challenging endeavour for teachers. It does this through the framework of Schatzki’s practice-centred theoretical perspective. Schatzki (2002) describes how practices and arrangements can “cohere, conflict ... enable as well as constrain each other” (pp.156-157) while contexts “have powers of determination” and thereby can “prefigure” or “enable or constrain what occurs in them” (p.62). Practitioner research is often the new practice introduced to a school within the context of existing practices, or practice architectures (Kemmis & Grootenboer, 2008b). The extant practice architectures in a school may constrain the effective operation of practitioner research by prefiguring and remodelling it.

Although practitioner research has enjoyed phenomenal growth as a form of teacher professional learning (Bruce, Flynn & Stagg-Peterson, 2011; Campbell & McNamara, 2009; Cochran-Smith & Lytle, 2009) some of this popularity may be explained by administrators using it as a practice to achieve their own educational reforms (Somekh & Zeichner, 2009).

This modification of practitioner research can be explained by Schatzki (2002) who claims that the world and society is dynamically ‘in the making’ and that that any practice is transitory, dynamic, temporally evolving and transmutating. Pre-figuration, as defined by Schatzki, is how the world channels forthcoming activity and can be equated with the notion of constraint and enablement. Consequently, any practice, including practitioner research, will be enabled and constrained, prefigured and remodelled by the context in which it transpires. Kemmis (2009) similarly describes how practices are in an “endless dance ... restlessly made and re-made ... in each different time and place” and may be “transformed” as well as “reproduced” (p. 466).

An in-depth exploration of the ways in which practitioner research is practised by teachers is significant in a professional climate where practitioner research has been adopted as a key professional learning strategy. While some of the factors that act to constrain practitioner research are described in the literature, there is little detail on how these factors vary across different contexts or the extent to which these factors prefigure and remodel practitioner research as a practice. This study investigates teachers’ experiences across two contexts. It describes the range of challenges teachers in Singapore and NSW encountered during their work as practitioner researchers including the existing practices that constrained their efforts. It further illustrates how these factors might act to prefigure and remodel practitioner research as a practice within each of the two different settings.

Expanding on these issues, this paper proceeds as follows. The first section provides a definition of practitioner research. The second examines the existing literature on the factors that might enable or constrain practitioner research in schools. Some brief background on the two contexts under study is given in the third section. The methodology employed is outlined in the fourth section then the findings given in brief. A detailed cross analysis using Schatzki’s practice theory of the Singaporean and NSW contexts is presented before a conclusion is offered in the closing section.

## **A Definition of Practitioner Research**

Practitioner research is a hypernym or blanket term that encompasses many different traditions, movements and methodologies and includes, as Cochran-Smith and Lytle (2009) have identified, teacher-research, practitioner inquiry, problem-based inquiry, action research and action learning. Practitioner research provides a means of interrogating educational practices in order to reconceptualise and transform those (Campbell & Groundwater-Smith, 2010) and is distinguished from other more traditional forms of education research because it is undertaken by practitioners as part of their daily work. While it exists in “any number of hybrid forms” (McWilliam, 2004, p. 113) and is often “variously described” (Cordingley, 2008, p.46), all variants of practitioner research share the following characteristics:

*They view the practitioner as researcher; professional contexts are the sites of study; there are blurred boundaries between inquiry and practice; community and collaboration are important constructs; and they act to make new knowledge public and have this new knowledge lead to improved practice. (Letts, 2013, p.478).*

The next section of the paper reviews the literature on the challenges that practitioner research may encounter in the school context.

### Challenges to Practitioner Research

A teacher will encounter either enabling or constraining factors when engaging in practitioner research. It should be noted that the same factor can act as either a facilitator or barrier to practitioner research, depending on whether it is abundant or lacking, present or absent. By illustration, if an empathetic and supportive school leadership acts as a facilitator to practitioner research, then likely an uninterested and unsupportive management team will act as a barrier or challenge.

Stenhouse (1975), 40 years ago, was able to identify and describe a comprehensive list of what some of the challenges might be to curriculum reform and research in schools, through his own conjectures and by citing the conclusions of other researchers. These factors largely still apply in a contemporary context. Challenges to innovation, Stenhouse said, can occur at the individual, internal or external level and be personal, interpersonal, professional, political or cultural in nature. This typification is used to organize the following discussion.

At the personal level, teachers commonly encounter “psychological and social” (Stenhouse, 1975, p.159) challenges when assuming the role of teacher-researcher, finding the interrogation of their own practice personally threatening or it difficult to stand back from their work and be self-critical. Teachers often lack the confidence “to be self critically reflective of their classroom practice” (Aubusson, Brady & Dinham, 2005, p.27). Others are sceptical about the usefulness of practitioner research (Burns, 1999). Groundwater-Smith, Ewing and Le Cornu (2003) have described education as the most “resistant” profession in terms of its ability to embrace change and envision the future. Consequently, they claim, teachers commonly resist change due to the “uncertainty, anxiety, conflict and ... sense of loss” it involves (p.144). Introducing change takes both time and energy which Aubusson et al (2009) note “are often in short supply in a busy school” (p.11).

At the interpersonal level, collegiality and collaboration between teachers is crucial if practitioner research is to be successful in schools (Ewing, 2007; Stenhouse, 1975) although many prefer to “retain their current safety in isolation” (Aubusson et al., 2009, p.64). A “research climate” needs to operate where all participants communicate with a certain sense of clarity, precision and certainty. Teachers need to be passionate and committed to working effectively in teams (Aubusson et al., 2009; Capobianco, Lincoln, Canuel-Browne & Trimarchi, 2006) but often require training and guidance from external sources to do so (McLaughlin, Black-Hawkins & McIntyre, 2008). Tensions can arise when teachers engaging in research and publication are viewed suspiciously (Burns, 1999), resented (Aubusson et al., 2009), or ostracized (White, 2011) by their colleagues who have been excluded from the research enterprise. Tensions also can arise between academics and teachers due to differences in the professional culture of universities and schools (Atweh & Burton, 1995; Cohen et al., 2007; Ebbutt, Robson & Worrall, 2000; Rosendahl & Rönnerman, 2006; Somekh, 1994; Stenhouse, 1975), so external experts must learn to work “WITH teachers” (Ewing, 2007, p.5) when working collaboratively on research projects.

The need to develop “a general theoretical language” (Stenhouse, 1975, p.157) is one of the theoretical and methodological problems practitioner researchers face at the professional level. Teachers often feel threatened by theory (Elliott, 1991) and tend to use their own experiences rather than either the literature or research to effect curriculum reform (Rosendahl & Rönnerman, 2006). They commonly perceive research as something “alien to their experience” (Somekh, 1994, p.373). The skills and abilities needed to undertake practitioner research are “not naturally present in all teachers” (Enthoven & de Bruijn, 2010, p.298) and teachers often experience anxiety about their research skills and capacity (Burns, 1999).

Ample time is the key condition to the success of professional learning (Ingvarson, Meiers, & Beavis, 2005) and practitioner research (Aubusson et al., 2009; Ewing, 2007; Neapolitan, 2000). Consequently, a shortage of time will “probably exclude all but the most energetic teachers from such work” (Stenhouse, 1975, p.157). Although in some cases teachers might be “off-loaded”, generally they are not given credit for undertaking research in their schools. They also face timetable pressures and constraints (Burns, 1999). Such limitations mean that teacher-researchers commonly are forced to prioritise, “robbing Peter to pay Paul” in order to do practitioner research (Aubusson et al., 2005, p.30), while many teachers do not have the time to write up their practitioner research in a publishable form (White, 2011).

In those precincts, where “money buys time” (Aubusson et al., 2005, p.21), a hierarchy exists. Funding is essential in order that time can be made available so that teachers can collaborate, collect data and reflect on their practice (Aubusson et al., 2009). Stenhouse (1975) argues that schools need to support teachers for change and innovation at the professional level and that resources including staffing, teaching materials and buildings must be made available as needed. Somekh (2011) further notes that the “audit culture” (p.116) which currently prevails in many education systems around the world further aggravates teachers’ work as researchers.

At the political level, major innovation often results in a redistribution of power (Stenhouse, 1975) and school-based practitioner research has the potential to generate “conflict between administrators and teachers” (Elliott, 1998, p.184). Questions are raised about the ownership, power and the democratic rights of practitioner researchers and research participants when the research is mandated from above, involves an expert such as an academic partner or advisor, or is otherwise constrained by an outside agenda (Atweh & Burton, 1995; Elliott, 1991, 1998; Groundwater-Smith & Mockler, 2005, 2007; McKernan, 2008; Somekh, 1994). Teacher researchers can sometimes find themselves “caught up in an externally imposed implementation agenda” (Groundwater-Smith & Mockler, 2007, p.207) or find their research project is “hijacked” by an academic partner (Elliott, 1991, p.15). However, it is argued that teachers should always be regarded as professionals actively responsible for their own learning (Ewing, 2007). If practitioner research is to be effective in schools it is imperative that teacher researchers be given ‘collective authority’ over the research agenda (Capobianco et al., 2006; Goodnough, 2011; Groundwater-Smith & Mockler, 2005) and that participation in any such enterprise be voluntary (Aubusson et al., 2009; McLaughlin et al., 2008).

Culture refers to the shared beliefs, practices and attitudes of a group of people. If practitioner research is to succeed, then innovators need “to free themselves from the fundamental beliefs and values embedded in the culture they want to change” (Elliott, 1991, p.48). At a school level, parental and social opinion, including putting pressure on schools to perform, might impede the successful implementation of practitioner research (Stenhouse, 1975). Indeed, deep seated cultural, social, political, economic and historical dimensions have been identified as serious constraints to the success of practitioner research in Singapore schools compared with “superficial” constraints such as a shortage of time and lack of rigour (Hairon, 2006).

The head of the school has an important role as a change agent (Stenhouse, 1975). Also, a climate of trust must be established in schools to allow teachers to “question, take risks and respect different points of view” for a professional learning community and practitioner research to thrive (Ewing, 2007, p.3). It is imperative that a culture of enquiry, collaboration and professional dialogue be carefully nurtured by school leaders as practitioner research is “not a ‘natural’ state for secondary schools” (Carter, 2008, p.81).

This section of the paper has surveyed some of the challenges to practitioner research identified in the literature. From this foundation, this study explored whether teachers functioning as practitioner researchers in schools across different contexts encountered similar challenges to those documented in the literature or whether their experiences were significantly different. Furthermore, the study sought to illuminate how these factors might act to prefigure and hence remodel practitioner research as a practice by “constraining and enabling it” (Schatzki, 2002, p.44-45). This study was conducted in Singapore and the state of New South Wales (NSW) in Australia. A description of the educational context for this study in both jurisdictions is given in the next section of this paper.

### **Singapore and NSW as Case Studies**

MacFarlane’s (2004) states there must be “deep similarities ... but also very deep differences” (p. 109) when making a comparison across cultures. The selection of Singapore and NSW satisfies this condition, justifying the viability of this comparative study. Both are developed countries situated on the Pacific rim and rank highly in many international comparisons of national performance including public education (e.g. Programme for International Student Assessment). Both have responded to globalisation through moves towards the marketization and decentralization of education with both education systems currently undergoing change and reform. At the same time, there exist significant cultural differences between the two, in terms of race, language, religion and history.

It has been recognised that practitioner research is a valued practice in Australia (Campbell & McNamara, 2009) whilst teacher educators in Singapore also “speak of the need for action research and reflective practice” (Gopinathan, 2006, p. 264). The Australian Charter for the Professional Learning of Teachers encourages teachers in NSW schools to engage in action research and inquiry (Australian Institute for Teaching and School Leadership, 2012) while action research/action learning is identified as a key strategy in the Professional Learning Continuum framework that guides the development of all school staff (NSW DET, 2006). In Singapore, the Ministry of Education (MOE) since the late 1990s has implemented a suite of policies around school-based innovation and research, such as the Teach Less Learn More Ignite, defining its approach to practitioner research in schools as a “bottom up initiative, top down support” (Tharman, 2005).

### **Methodology**

An interpretivist-constructivist philosophy was adopted for this study embracing the view that all human practices are developed and transmitted in a social context and that meaning is constructed (Bryman, 2001). A qualitative case-study design employing semi-structured interviews created the opportunity to explore the factors that either mitigate or impede practitioner research in secondary schools across the two contexts studied. The semi-structured interview was used as it provides an opportunity to conduct an in-depth examination of the topics and is particularly good at capturing the depth and complexity of participants’ experiences (Davies, 2007). Approval was sought and gained to conduct the research inquiry from the University’s Human Research Ethics Committee, the NSW Department of Education and Communities (DEC) State Education Research Approvals Process and the Singapore Ministry of Education. All participants gave written consent prior to being interviewed and their identities were kept anonymous. 42 respondents were interviewed in total across the two settings. This included a cross-section of “theorists, policy makers and practitioners” (p.81) which Crossley and Watson (2003) advocate is essential for

successful comparative research in education. The main sample group, though, was secondary school teachers with experience as a practitioner researcher.

Purposive sampling was used to select three schools active in practitioner research from metropolitan NSW and three schools active in practitioner research from Singapore. The sample included both government and independent schools from each jurisdiction so as to represent a cross-section of the different types of secondary schools that occur. The sample also included schools that had an established culture of research and schools that were newly embarking on practitioner research in order to investigate any variance that might exist between the different contexts. As there was no definitive sampling frame for teachers as practitioner researchers, either for teachers in Singapore or in NSW, key informants or “gate-keepers”, such as School Education Directors, were used to identify suitable schools. Principals or senior personnel then identified teachers who matched the sampling parameter so that four to five teacher researchers were included in the study from each school. Respondents varied considerably in terms of experience and training as researchers, some being newcomers to practitioner research while others held a Masters by research degree.

Interviews ranged from 33 to 99 minutes in duration, all interviews being digitally recorded then transcribed verbatim. The transcripts were next returned to respondents for member checking. Data analysis was iterative, recursive and dynamic and coincident with data collection. While the general issues that are of interest were determined prior to analysis the specific nature of the categories and themes to be explored were not predetermined. A hermeneutical approach assuming a pragmatic, constructivist perspective (Gadamer, 1975) was adopted in an effort to understand and interpret the data. Thematic analysis was used to identify patterns and themes that occurred in the data. At the same time the researchers allowed for further expansion on and revision of themes as they emerged - it being common practice for qualitative researchers to conceptualise and formulate theory as it comes from the data (Gibbs, 2002; Neuman, 2006).

## **Findings**

The challenges that the teachers from Singapore and NSW reported that they experienced with practitioner research are presented here. Respondents commonly cited time, the pressure to teach the syllabus, and inadequate training as challenges to conducting practitioner research. In Singapore teachers viewed documenting research as being problematic while the specific challenges to practitioner research reported in NSW were school leadership, sustained commitment to the project and the need to find a supportive academic partner.

### **Time**

Teachers from both NSW and Singapore reported significant time pressures associated with the extra burden of conducting practitioner research in addition to current workload. Time pressures limited opportunities for reflection both alone and with colleagues. There was also often an issue with the short time frames allocated to practitioner research projects.

A lack of time can impact on the quality of research done. One teacher noted, “[T]o do a good piece of research, you really need to sit down, spend time thinking through, designing, doing a good research plan” while a colleague at another school believes much of the research done in schools “is just touching the surface and it is not going in-depth

enough”. Although practitioner research is meant to be “a reflective practice” there was no time for reflection he believed.

In addition to availability, alignment of time also posed a barrier when there was no common time for team members to meet or observe each other’s work. One teacher explained, although she had been slightly off-loaded from other duties to do research, “Sometimes the lesson that I want, that I am interested in observing, doesn’t fall within that period of time that I am blocked out for”.

A third limiting factor was that often research projects need to be completed within a restricted time span. One academic thought it “an artificial parameter” that research projects under the Teach Less Learn More (TLLM)-Ignite programme in Singapore “must be completed within one calendar year”. The deputy dean of the Curriculum Planning and Pedagogy Unit in Singapore, conceded that often the time stipulated “is too short for researchers to see any positive outcomes or conclusively say the innovation is adding value”. This indicates that while schools might value practitioner research in principle they may view it as too time-consuming in practice.

### **The Pressure of Completing the Syllabus**

A challenge to practitioner research within Singapore and NSW was the continued pressure on teachers “to teach to the syllabus”. An academic described how teachers felt “frustrated” and “constrained” in not having “the degree of freedom” they would like to transform their practice. He observed that the “borderlines were very hard and impermeable”, as far as he could see. Another teacher stated, the “main restriction” on doing research was “the same old syllabus, syllabus, syllabus - we have to finish the syllabus”. In NSW a deputy principal stated that a “teachers’ focus is on getting through the syllabus” and they would “resist” doing practitioner research if it meant time was “taken away from the classroom”. A teacher agreed that “most teachers ... are run by curriculum ... and have very little time free to do anything else”. These data suggest that the innovative pedagogical practices associated with practitioner research will not be sustainable unless certain systemic changes are made to relieve the pressure on teachers to cover the syllabus.

### **Inadequate Training as a Researcher**

Stakeholders from both Singapore and NSW reported that inadequate research training and the resultant lack of teacher skills to effectively conduct research were also viewed as challenges. Both executive staff and teachers believed that a lack of knowledge about research posed a significant challenge. A superintendent observed that for most teachers, “knowledge about research is a barrier”. Teachers “do not know enough about what it is”. Many teachers did say they feel they are inadequately trained to effectively conduct research in their schools. Teachers generally reported that there was little or no training provided on research during their undergraduate years. “There wasn’t a formal course, how to do it properly and so on, so it was like a trial and error type of thing”. This lack of understanding of research also extended to the teachers who had received some training.

The teachers in the study who had been trained as research ‘activists’ under the TLLM-Ignite programme in Singapore admitted they lacked confidence and had a poor understanding of research methodology, especially qualitative approaches, and of practitioner research. In some instances the research activists did not pass on what they had learnt to others. One teacher stated that the research activist “only shared a little bit with me, in terms of the research methodology”. In other instances some of the research activists’



misunderstandings were transmitted to other teachers in the school with members of one research team frequently referring to practitioner research although they displayed little notion of what it constitutes.

### **Documenting Findings**

There was one challenge to practitioner research that is particular to Singapore. This was the requirement for teachers to document their research outcomes. Both school leaders and teachers in Singapore saw the need to document research as being problematic for most teachers. A trainer from the teachers' network observed that teachers liked to talk and share but not write or document their activities, stating it was "difficult ... to get the documentation and all that". A vice principal also observed that teachers would be excited with planning and trying out an innovation to "see whether it is effective. But teachers don't really have that culture to do documentation". Evidencing this, a teacher stated, "One of the things I face is writing, putting down in words and writing it up. On my own, I always like to try out and do it ... but I didn't document it". The vice principal believed that if research was not properly documented then the learning remained a personal thing and would not be shared across the school thus impeding what good research is all about.

### **School Leadership**

School leadership without a commitment to practitioner research was a challenge reported by the stakeholders in NSW. Practitioner research is not necessarily encouraged "across the board", a school educator director observed, because it depends on the "leader's thinking ... It is still very leadership dependent". A deputy principal opined that often "our senior executives in schools" do not feel that "paying attention to educational research is worthwhile. There is too much cynicism. It is very sad".

One view was that many school leaders may not be proficient at leading a research enterprise in their school. A professional learning consultant venturing "a wild generalization" believed "the leadership and executive in schools is not skilled enough themselves" to lead a research enterprise because they do not have the "vision to do that and the experience". She warned that school leaders with the required skills were rare:

*When you look at school principals across the state, for a lot of them ... professional learning is not their strength. And to set up [professional learning] PL in schools, first of all, you have got to have a lot of clarity yourself. You have to have a lot of experience yourself. You have got to fund it. You have to lead people ... And I don't think that the skill base is there to do that in schools at the moment.*

The lack of supportive leadership at the school level, therefore, is a significant challenge to the conduct of practitioner research in NSW schools.

### **Sustained Commitment**

Another challenge to practitioner research reported by respondents in NSW was the common perception that it is a big commitment, requiring a lot of time and effort on the part of the school and teachers. While many teachers might be enthusiastic at the start, it was

often reported that they were not able to sustain the energy required to see the project through to its end. Intentions did not always translate into realizable action. One academic related how “50 per cent” of teachers he was working with that semester “found it too taxing to actually complete action research projects” but understood that they “are grossly over worked” and “barely have time for anything, let alone the reflective cycle”. A professional learning consultant described why it was sometimes difficult to complete practitioner research in schools:

*I just think it takes a lot more energy to get teachers involved, because it is a big commitment. You know, it's slower. You have to go to a lot of meetings. You've got to really work with people. You've got to invite people into your classrooms, maybe. It's much more challenging.*

A deputy principal concurred with this view, stating, “If you do this kind of research, it takes time” while teachers themselves described doing practitioner research as a “huge” investment of time and “incredibly time consuming”.

### **Finding a Suitable Academic Partner**

Many respondents in NSW agreed that the best quality research came from schools when teachers worked in collaborative relationship with academics. However, while schools might desire to work with an academic partner, many found difficulty locating and securing a suitable person. A school educator director explained, “It is very difficult to find someone who is willing to come in. There's no formal way of finding an academic partner” except “through hearsay”.

The difficulty of procuring an academic partner can be compounded by the challenge of working with an academic partner who is not fulfilling their role. A school educator director claimed that “a bad experience with an academic partner can be a barrier”. Recalling a particular experience they described an academic partner who “did nothing. It was a waste of time. And a waste of us in paying the money”. Furthermore, teachers could sometimes show resistance to academic partners entering the school unless a relationship of trust was built. “It is about developing trust”, emphasized one academic.

### **Discussion**

The data reported in this study indicate that there exist significant challenges to the conduct of practitioner research in schools in NSW and Singapore. These challenges coalesce around the meta-themes of time and culture. The meta-theme of time subsumes the themes of workload, commitment, documentation and the pressure of teaching to the syllabus. The meta-theme of culture subsumes the themes of research capacity (skills deficit and the need for an academic partner) and a lack of leadership. These descriptive themes could be taken at face value by policy-makers and addressed by separate policy solutions such as allocating more release time for teachers involved in practitioner research. However, this piecemeal approach may not address some of the underlying causes of these problems. Schatzki's practice theory (2002) as well as Kemmis and Grootenboers' idea of practice architectures (2008) provides an useful explanatory framework for why such a professional learning strategy like practitioner research encounters such challenges in practice.

Any practitioner research enterprise in a school occurs within a network of other practices, or what Kemmis and Grootenboer (2008) have described as a “meta-practice”. These various practices can cohere or conflict (Schatzki, 2002), thereby acting to pre-figure practitioner research for teachers. Kemmis (2010) states that practitioner research is shaped by “inherited ways” and by “pre-existing patterns of relationships between different people involved in the process” (p.421). The existing workloads of teachers is one practice that conflicted with the new practice of practitioner research.

### Time

Across both cultures teachers undertaking practitioner research were forced to cope with many competing priorities. As Groundwater-Smith and Mockler (2007) state, “Engaging in practitioner research involves an opportunity cost to the community. To do it well requires time and energy that cannot be spent in other professional ways” (p.206). The fourth of Dylan William’s (2014) guiding principles for teachers embarking on professional learning is:

*the action plan should identify what the teacher plans to reduce, or give up doing to make time for the changes: most teachers are working as hard as they can, so if these changes are treated as an addition to their load, they are unlikely ever to be implemented (p.18-19).*

It is possible to make an inference from the data reported in this study that in most cases practitioner research was an addition to these teachers’ workloads. This addition occurred to a workload that has intensified due to increasing accountability and regulation of teachers’ work in both Singapore and NSW.

Kemmis and Grootenboer (2008) note that increasing the regulation and accountability of teachers reduces the time they have to focus on their primary practice, thus acting to undermine and subvert good practice, including practitioner research. In this study, teaching to the test and an audit culture focusing on the mandated curricula were perceived as challenges to practitioner research. In Singapore, the proclivity to focus on the syllabus and exam results was attributed to deep-seated cultural traits (Hairon, 2006), whereas in NSW it was seen as a newly emerging phenomenon. As a result, the new practice of practitioner research tended to conflict rather than cohere with other existing teaching practices.

The conflict of the practitioner research with existing practices due to time pressures may lead to perverse outcomes. Individual respondents both in Singapore and NSW noted ironically that the more time is spent on research in order to improve practice, the less time is spent on the “core business” or primary practice of teaching. Furthermore, respondents in both cultures described how the two practices, practitioner research and teaching, often conflict rather than necessarily cohere, thus, as Kemmis and Grootenboer (2008) have described, sometimes threatening “the conduct of the practices they aim to engender and sustain” by unwittingly generating constraints in “pervasive ways” (p.57). As time is finite and limited, engaging in practitioner research commonly takes teachers away from the classroom and reduces their preparation time.

## Culture

If practitioner research is to be pervasive across an education system then teachers need to be equipped with both the theoretical and practical skills to undertake research in their schools. This is critical as manifesting an understanding of and transmitting a practice are crucial to its preservation (Schatzki, 2006). Across both cultures, practitioner research was transmitted as a cultural practice in a manner that almost set it up for failure at the onset. Often, there was no systematic training for teachers, little autonomy and scant regard for theory.

There was not a homogeneous, systematic or comprehensive means for training staff across either teaching force. Some teachers were self-taught or learnt “on the job”, others had learnt formally through post-graduate work, while teachers working on research projects or teams tended to learn through targeted training, from academic advisors or partners, or from their peers. Both the quantity and quality of learning received was therefore uneven. As a consequence, practitioner research was “differentially incorporated” into the minds of those participating in the practice due to “differences in participant’s training, experience, intelligence, powers of observation, and status” (Schatzki, 2005, p.480). Thereby, the practice became “sometimes descendant” or a “considerably altered version” (Schatzki, 2005, p.478) of what was conceived originally by theorists or policymakers, the changes being made often “unintentional” as participants did not appear “conscious” of them (p.475). Hence, the dissemination of the practice fostered its metamorphosis and diversification.

Furthermore, teachers across both contexts often remained “theoretically innocent” (Stenhouse, 1985, p.16). Research was often conducted without knowledge of the relevant theory so that a theory/practice divide prevailed. Although academic partners did on occasion provide selected literature, teachers tended to only scan through this material citing they were time poor. Teachers tended to focus on the more practical rather than theoretical concerns. This might suggest that academic partners need to workshop the literature otherwise it is material that is simply collected and stored away by teacher researchers.

While many respondents across both contexts believe that practitioner research works best when done in partnership with academics, for long term sustainability teachers need to be given the tools to be able to research their own practice, otherwise the rules and understandings constituting practitioner research will remain “differentially distributed among participants in the practice” (Schatzki, 2006, p.1869).

There were examples from both cultures where teachers were tasked or mandated to undertake practitioner research, especially when management had decided to initiate a school-based research enterprise. In Singapore, in particular, teachers were often conscripted into system wide research projects where they collected data rather than define the research questions. Yet it has been convincingly argued that teachers should be “agents of the research” not merely “objects” in, or “observers” of, the process (Kemmis, 2011, p. 13). People achieve knowledge of a practice by participation and by their activity, not just from observing others “doing and relating” (Kemmis & Grootenboer, 2008, p.56). Thereby, these teachers had not been given what Lave and Wenger (1993) have described as “legitimate peripherality” as they were not crucially involved in participation but remained as observers. Practitioner research is not just a matter of instrumental behaviour and following rules but should be a consultative process where proponents proceed towards consensus about what to do (Kemmis, 2010).

## Conclusion

The aim of this study was to investigate the range of challenges teachers in Singapore and NSW encountered during their work as practitioner researchers. In both Singapore and NSW, a scarcity of time, the pressure of completing the syllabus, and the inadequate training of teachers as researchers were perceived as important constraints to the conduct of practitioner research in schools. Other significant challenges identified by respondents include the documentation of research, school leadership, sustained commitment, and finding a supportive academic partner to work with on the research enterprise. It was also evident that within each of the two contexts studied these constraining factors often functioned in unique ways to pre-figure and pre-form the way practitioner research was understood and practised in schools. This meant that practitioner research was often translated into practice in a variety of ways.

While some of these challenges or constraints appear almost immovable, such as the deep-seated cultural practice of teaching to the test, other challenges that have been identified above can perhaps be more immediately addressed. Teacher educators, in particular, could play a more significant role through providing (greater) research training to equip teachers with both the theoretical and practical skills necessary to undertake practitioner research. They might also (more willingly) act as an academic partner or critical friend to support research enterprises in schools. Such help, at the least, is needed if teachers are to truly develop a 'researcherly disposition'. It would take an intrepid teacher, indeed, to embark unassisted on a journey of practitioner research given some of the perils they would likely need to navigate as this paper has identified.

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