Reflective practice and inquiry are aspects of teacher professional practice that characterise teachers as learners. Reflective practice in some form is considered in contemporary education as an essential activity for teachers and teacher educators. ‘Inquiry as professional development’ and ‘inquiry as research’, on the other hand, are forms of reflective practice designed and intended to go beyond the personal. We explore the following three research and two inquiry approaches that teachers can use to inform their practice and contribute to our collective knowledge about teaching: the research methods of self-study, autoethnography and action research, and the inquiry approaches ‘teaching as inquiry’, and ‘spiral of inquiry’. Any research or inquiry approach used needs to fit purpose, language use, positioning as a researcher and writer, degree of reflexivity and the degree of public critique of the project. When the chosen approach fits, our research work has a better chance of improving teaching, student progress and achievement, in short: being useful to others.

Keywords
Inquiry; Reflective practice; self-study; autoethnography; teacher professional learning

Part of teachers’ professional identity, at whatever level, is their ongoing habit of learning. Two aspects of this learning habit, identified probably earlier even than John Dewey (1859-1952)--who many of us are familiar with--are reflective practice and inquiry. The phrase ‘reflective practice’ can be understood two ways. It can be used to refer to a habit of people such as teachers who reflect on their own practices, or it can refer to a style of practice as in ‘teaching as reflective practice’- the practice of the teacher here referring to teaching not to reflection. Dewey throughout his life wrote about how having an experience does not necessarily lead to learning but reflective practice in ‘working with’ our experience helps us to build knowledge and understanding that we can draw on in the future. In making sense of our own experiences we sustain our learning. When we examine and make change in the present we open up different possibilities for the future.

Reflective practice as a deliberate practice of habit is recognised by many researchers as an essential activity for teachers and teacher educators (for example, Boud, Keogh, & Walker, 1985; Cochran-Smith & Lytle, 1999; Dinkelman, 2003; Loughran, 2002). Several semi-structured approaches to reflection have proven useful to educators in enhancing their teaching, learning and leadership practice across the sectors. Among some of the most influential are Donald Schön’s (1983) reflection on action, in action and for action; Stephen Brookfield’s (1998) reflection four ways through autobiography, student feedback, professional conversation, and reading such as through further study; and Smyth’s (1992) four-step model of ‘describing (What do I do?), informing (What does this mean?), confronting (How did I come to be like this?) and reconstructing (How might I do things differently?)’ are among some of the most influential. Reflective practice is a thoughtful and essentially personal process although often undertaken with a critical friend.

Research and Inquiry

Research or inquiry for professional development are forms of reflective practice that go beyond the personal and make the process public. An inquiry process, along with learning from this process, is intentionally designed by the inquirer to be shared. There are various forms of inquiry but here we
briefly outline five ways teachers can approach a study of practice. These approaches to research or professional development can be complex and the concepts of each can overlap so, for a paper of this length, we leave out many nuances. The approaches we explore—self-study, autoethnography, action research, teaching as inquiry and spiral of inquiry—are all qualitative with a focus on understanding human beings in a social world where the human beings are educators/teachers and the social world is the school and/or classroom setting. Each of these approaches also have differences, particularly in the place of the researcher within the research and how the research is reported. Ellingson (2011) used continuum(s)/ continua to suggest we can differentiate the analysis and representation in qualitative inquiries using a) the nature of the writing (e.g. first person, second or third person; active to passive voice); b) the place of the researcher within the study (researcher as main focus—participants as main focus—the researcher ‘outside’ the frame of results); and c) the vocabulary used (e.g. artistic, personal, creative, themes and categories, thick description, conditions, variables, validity and reliability). In this paper we highlight some of the similarities and differences in analysis and representation of these five approaches, our intention being to provide a starting point or prompt for your exploration. We suggest that those contemplating an inquiry investigate these approaches further than we do here:

- **Self-study**, for examining one’s own practice to gain self-knowledge and professional growth with consequential expected improvement in practice.
- **Autoethnography**, for attention on social, cultural and political issues through a personal lens.
- **Action research**, for identifying ‘new’ actions, individually, as a team or in an organisation, to implement and evaluate for shifts in the consequences of our changes.
- **Teaching as inquiry**, for focusing directly on greater levels of student achievement as defined by centralised standards.
- **Spiral of inquiry**, for the exploration of hunches, involvement of students, and development of innovative practices to change the way in which things have been done previously for learners by teachers.

We leave the two inquiry approaches until last because we believe that New Zealand teachers in particular are likely to be familiar with the Ministry of Education’s ‘teaching as inquiry’ cycle (Ministry of Education, 2007, p. 35). *Te Marautanga o Aotearoa* does not speak directly of teaching as inquiry; however, in the section “Ngā Ahuatanga Ako” (Effective Teaching and Learning) there is reference to a “fundamental focus of quality teaching” with an implicit suggestion that teachers are also learners (ako) (Te Tāhuhu o Te Mātauranga, 2007, p. 11).

**Self-study**

As the name implies self-study is self initiated and focused on individual practice. Australian researcher John Loughran explains that self-study combines attention to ‘self’ as an educator, and to ‘study’ but usually emphasises one or the other (Loughran, 2004). Dinkelman (2003) defines self-study as “intentional and systematic inquiry into one’s own practice” (p. 8). The key focus of self-study then is our own practice, our self in action.

The aim of self-study is to better our knowledge of practice in the context of our own work thus developing both our personal and professional knowledge base. Self-study is improvement orientated, interactive, and may include multiple methods. As Cochran-Smith and Lytle (2004) said, by “often drawing on biographical, auto-biographical and narrative forms of data collection and analysis, self-study works from the post-modernist assumption that it is never possible to divorce the ‘self’ from either the research process or from educational practice” (p. 607). A self-study can involve both autobiographical work as well as seeking responses from others. Self-study in the field of teacher education is typified by the central role of “collaborative interaction” (Vanasseche, & Kelchtermans, 2015, p. 516). Being so personally involved can give us blind spots so having the involvement of others in terms of feedback or as a critical friend is important.
**Autoethnography**

Autoethnography ‘privileges’ the self and the writing about self (auto = one, ethno = culture and graphy = writing or recording). Autoethnography is an autobiographical and personal exploration of self within a larger context (Hamilton, Smith & Worthington, 2008). In autoethnography there is greater emphasis on the public/private nexus than in a self-study. Such attention may focus on society and culture, privilege, systemic practice and/or policy.

Using autoethnography means questioning perceived ‘realities’ including the sense that individuals make of their own settings and experiences. Autoethnographic texts, which look critically and reflexively at personal experience, are presented to reader’s for (re)consideration of assumptions and views of identified public issue(s) (emerald & Carpenter, 2016, Rinehart & Earl, 2016). Certainly, an autoethnography improves the researcher-author’s understanding but the researcher intention is also to contribute to a change of understanding on the part of a reader.

As in most research, there are pitfalls to avoid. Chang (2008) warns against focusing predominantly on the self in isolation. Another pitfall is leaving out the reflexivity, analysis and interpretation that links personal experience to the wider public issue. Attention needs to be paid to ethical issues regarding how others are discussed and presented in the work.

Qualitative researchers using self-study and autoethnography typically reject notions of objectivity, neutrality and the suggestion that the researcher can be detached from the researched as an objective observer. Reflexivity is required in both self-study and autoethnography to question our assertions: ‘How do I view what I am focusing on?’ ‘How do I know?’ or ‘How else could it be?’

In general self-studiers and autoethnographers write in the first person. Linked to narrative inquiry (see Clandinin & Connelly, 2000), autoethnographers often use the power of story for ‘making sense’ and developing greater understanding and knowledge. This presentation of academic research writing in the form of stories influences our communication of content, specifically the types of claims authors can make and the connection a reader makes to the work; stories are effective in communicating personal experiences.

**Action research**

Action research has been advocated as the way for teachers to build their capacity as researchers of their own practice (see for example Leitch & Day, 2000). It is a strategy to solve an identified problem and produce recommendations or guidelines for an intervention or future practice. Action research is an interactive inquiry usually implemented in a team, a collaborative situation, and can be associated with ‘communities of practice/learning’. In an action research inquiry, all participants are active researchers and all researchers are participants.

Action research focuses on the use of evidence gathered and analysed in an attempt to pinpoint ‘variables’ and consequences of action(s). The aim is to modify current, perhaps established, actions for different outcomes. The focus is on practical changes through a cyclic process.

The cycles Jean McNiff uses are: preliminary diagnosis, data gathering, planning, action, further evidence gathering and identifications of recommendations (plan, act, access, evaluate). The action stage is the trialling of new actions, and the reporting of such a study is in a ‘this worked for us’ style. McNiff’s work on action research (for example, McNiff & Whitehead, 2011) is worth reading for understanding and implementing this research method as well as for examples of action research.

Two aspects of this type of research we think are worth noting are participatory action research and double loop learning. Participatory action research has been identified for intervention, development and change within groups and communities and builds on Paulo Freire’s critical pedagogy (1998). Chris Argyris (2002) proposed double loop learning to describe an inquiry to identify variables — variables not to be controlled but to shift or alter actions in response to what has been identified in order to achieve more desirable consequences. Argyris’s double loop learning is designed to be applied to organisational ‘behaviours’ as well as individual behaviours.

This said, Ruth Leitch and Christopher Day (2000) warn that action research can slip into a technical ‘recipe’ approach. However action research does not have to be technical to increase effectiveness, or
efficiency. Gosling (2006) reminds us that ‘improvement’ is multidimensional and relative to intended goals rather than a linear relationship between changed actions and impact. In practice, we tend to make several changes at once and also to fine-tune as we go. In the complex social situation that is teaching there are factors outside of the teacher’s control. Problem-solving and self evaluation capacities and understandings of the effects on teaching and learning of broader social and policy contexts are important within the action research process (Leitch & Day, 2000).

Action research involves collaboration with others from both inside and outside an organisation to generate knowledge of practice. The teacher as researcher is involved in the research as participant and researcher, and not just ‘the researched’ or an implemeneter of interpretations and innovations based on the research of others. This desire for ‘teacher as researcher’ is in each of the research approaches outlined here.

**Teaching as Inquiry**

The first thing to make very clear about ‘Teaching as Inquiry’ is that it is not inquiry learning such as students might undertake in school, although the process can take similar steps. Inquiring into teaching and learning through ‘Teaching as Inquiry’, according to the New Zealand Curriculum (NZC) is but one teacher action within “effective pedagogy” ((Ministry of Education, 2007, p. 34). Teaching as inquiry, therefore, is essentially a process for professional development.

Teaching as Inquiry is a purposeful and site based cyclic or staged model of individual study. Although perhaps intended also for group or collaborative study, the language of the stages of inquiry (use of ‘I’ and ‘my’) in the NZC suggests otherwise. The stages are:

1. **focusing inquiry**—establishing a baseline and determining what is important to spend time on for the specific group of students;
2. **teaching inquiry**—using evidence from research, past practice experience of their own and colleagues to experiment with planned “teaching and learning opportunities aimed at achieving the outcomes prioritised in the focusing inquiry” (p. 35);
3. **learning inquiry**—assessing the success of the planned teaching and learning for the outcomes identified using analysis and interpretation of information gathered. (Ministry of Education, 2007)

Teaching as Inquiry is an investigation of the influence of teaching practice(s) on student learning through a cycle of set steps for the express purpose of showing an improvement in student learning. The focus on improved learner outcomes can include those associated with individual students, with particular groups of students (such as English Language Learners, ‘priority learners’ or gifted and talented students), with a group of boys or girls, or with a whole class. Compared to action research, which requires action in response to research-participant inquiry that is underpinned by a socio-political or social justice intent, the NZC model of Teaching as Inquiry is “an instrumental formula for teachers to follow, with no requirement they examine their fundamental beliefs and assumptions” (Benade, 2015, p. 116). Leon Benade (2015) has pointed out that it is only implied that teachers use sources of evidence such as research literature—other than classroom based assessment data. He suggests that “teachers as inquirers’ is preferable shorthand for the active, collaborative effort of a community of professionals whose members seek to better understand themselves in order to better understand the work they do” (Benade, 2015, p. 118).

**Spiral of Inquiry**

In an attempt to refine the inquiry practices of schools and teachers internationally, Helen Timperley, Linda Kaser, and Judy Halbert (2014) have presented a framework they believe will help teachers focus on ‘quality’ and ‘equity’ of learning through a ‘disciplined approach’ to ‘collaborative inquiry’ ‘involving the learner’. They argue that “Sometimes it is our well-established practices or assumptions that are contributing to a situation for our learners” (Timperley, Kaser, & Halbert, 2014, p. 13) and propose that curiosity needs to be the driver of change. Timperley and colleagues emphasise that school leaders need to support teachers but that leaders can't decide on the focus of the inquiry as “it is the collaborative inquiry process that matters” (p. 5, emphasis added).
The spiral of inquiry framework Timperley et al., (2014) propose involves a process that encourages the presentation of intuitions and feelings about what is really happening for learners in an organised and routine way. They suggest, “Most of us are not really good at identifying for ourselves how we are contributing to particular situations” (p. 14). Their framework offers a structure for action starting with scanning (What’s going on for the learners?) then moving through focusing (Where will concentrating our energies make the most difference?), developing a hunch (How are WE contributing to the situation?), new learning (How and where will we learn more about what to do?), taking action (What can we do differently to make enough of a difference?) and checking (Have we made enough of a difference?). These researchers argue that promoting curiosity, focusing on the learner, providing opportunities for learner agency, opening up thinking and enabling honest dialogue with colleagues are all needed for any inquiry to move forward constructively.

Closing remarks

It is teachers who, in the end, will change the world of the school by understanding it

~Lawrence Stenhouse

The work of teachers in New Zealand has arguably changed a lot since the mid-1970s when Lawrence Stenhouse introduced the concept of ‘teacher-as-researcher’ (Rudduck, 1988). Stenhouse suggested that classrooms are the ideal setting in which to explore educational theories, with teachers being best placed to be the researchers. Then through the mid-1990s, David Hargreaves criticised teaching for not being a research-based profession. At the time, Hargreaves largely laid the blame for this on education researchers, whose research he saw as not building on previous research and not being practical enough; that is, not seen as relevant for teacher practice by teachers. Hargreaves argued for practitioners to take an active role in the direction of educational research (see Hammersley, 1997 for a commentary on Hargreaves’ lecture).

New Zealand teachers have been involved in research in a variety of ways as participants and or as graduate researchers in higher education qualification courses. More recently teachers have also been involved in the Teaching and Learning Research Initiative (TLRI), funded since 2003. This has the explicit aim “to enhance the links between educational research and teaching practices to improve outcomes for learners” (See http://www.tlri.org.nz/). The fund has done a lot to foster teacher involvement in research with this involvement as a form of partnership. More recently, the New Zealand Ministry of Education through the Teacher-Led Innovation Fund (TLIF) is funding school-based/school-led professional development projects. The TLIF supports teams of primary or secondary teachers to develop ‘innovative practices’ that ‘improve learning outcomes’ (See goo.gl/ehJl2y). The TLIF comes under the Investing in Educational Success (IES) initiative, which established Communities of Learning in 2015, although schools do not have to belong to an official ‘community of learning’ to apply. It is too early to determine the degree of success or otherwise of this initiative.

In the three research and two inquiry approaches highlighted here, it is what is emphasised that signals the key difference among them. In an autoethnography the researcher puts their personal experience forward as the vehicle for the reader to (re)consider a more public concern. In a self-study the emphasis is on personal-professional growth, whereas in action research the emphasised aspect is taking a ‘new’ action in order to evaluate what such a change might have on improving the pedagogy or curriculum aspect that is our focus. In ‘teaching as inquiry’ and ‘spiral of inquiry’ the emphasis is on teachers changing their practices, individually or collectively, to make a difference in student achievement outcomes and in student experience respectively. All five approaches involve teachers as researchers as the primary participants but not necessarily the only participants, or the only one involved. The ‘validity’ of these approaches is in their ‘verisimilitude’, the appearance of feeling ‘real’ or authentic (Denzin, 2000). Laura Ellingson (2011) suggested quality ‘criteria’ must also include openness and reasoning, and that our stories, while plausible, also resonate, engage, and move the reader. Is the work life-like, and believable? Can the reader imagine this occurring? As a basis for judging these types of research another question would be: Is it useful?

It can be risky for any teacher to put his or her own practice and exploration (research or inquiry) in the public arena. It is important that teachers can trust that the process will not be used for
accountability or supervisory purposes but for authentic learning outcomes—for themselves as teachers, and for their learners. There must be “safe” spaces for professional collaboration and ‘experimentation’ in practice. School leadership and Boards of Trustees need to support the added time that is required for sustainable outcomes from an inquiry. They also need to support the values inherent in an inquiry process and in individual and collaborative professional development.

Cathy Wylie (2014) has pointed out that: “Teacher collaboration and inquiry are now familiar terms in New Zealand. Indeed, new policy relies to some extent on their existence, as well as seeking to take these professional practices further” (p. 3). Wylie, using New Zealand Council of Educational Research (NZCER) survey results, showed a significant increase between 2007 and 2010 in primary teachers saying they had ‘enough time’ together to plan and discuss work. This was seen as evidence that collaborative work was being given emphasise by school leaders. However, between the 2010 and 2013 surveys funding for school cluster-based work ended and professional development decisions shifted to control by local Ministry of Education officials directed by government education policy agendas. The NZCER 2013 survey results showed that teachers felt opportunities for professional conversations and collaboration had, at best, ‘stalled’ (Wylie, 2014). How we might support opportunities to grow teacher collaborative capabilities for inquiry is a challenge for all of us.

Through the habit of reflective practice and inquiry many teachers seek to strengthen their work, to sustain their efficacy and, in even small ways, to change future teaching and learning in their classrooms for the better. The more teachers understand different investigative approaches the better their decisions about what form of inquiry might best suit their particular questions and concerns, and their change purposes. With attention to how their chosen approach fits with their purpose, their language use, their position as a teacher, researcher and writer, and their degree of reflexivity, their inquiries have a better chance of being useful to themselves and to others. Being able to view their work and their situation through another’s eyes, from more perspectives that just their own, is critical to this usefulness. We hope this article contributes to teachers’ capacity to do this.

References


