Is Theory formulation and Research the Plaything of Practice: Wicked Problems in Facilitated Practitioner Research – A Case Study
Susan Groundwater-Smith, University of Newcastle, susangs@iinet.net.au

Introduction

In the overview to this symposium we argued that to research and theorise educational practices is to research ‘wicked problems’ and that, furthermore, connecting research and scholarship to practice is also a challenging and difficult business whether it be practice in the field or practice in the academy\(^1\). Drawing on the work of Rittell (1973, 1982) Conklin (2005) asserts that wicked problems are not about technical complexity such as may be found in an engineering problem but about social complexity where the intricacies arise from the dynamics of working with others. Rittell proposed that one cannot understand the problem until a tentative solution has been formulated; a solution that, in turn, presents a new problem that must be understood in context. Thus, since there is not a definitive problem, there is no definitive solution. Solutions are not ‘right’ or ‘wrong’ (best or second best) they may be ‘better or worse’, ‘good enough or not good enough’. Every problem has unique or novel characteristics.

A distinction needs to be made between that which is complex and issues that are complicated. The former is, as Black & Wiliam put it, messy, contingent and fragile (2003, p. 635). The latter is finite and capable of being unravelled and tidied up. In effect, practice in education can never be “tidied up”. We must learn to live with its dynamic and organic nature. Knight and Page (2007) quoting Laurence J. Peters have argued that “some problems are so complex you have to be highly intelligent and well informed just to be undecided about them”. They are, in effect, wicked problems. Complexity alone is not sufficient to warrant a problem being defined as ‘wicked’. Admittedly there are challenges that are complex, but nonetheless can be solved in a systematic linear manner and which can be ‘tamed’; for these the appellation does not apply. The tame problem is where the situation is seen as stable; there is a definitive end point; the solution can be evaluated; and, it belongs to a class of problems that have been solved in a similar manner.

Some would believe that by studying a problem we can tame it; more often than not, in educational research designed to inform practice, by conducting a meta-analysis of the solutions that have arisen across multiple studies, for example, the work of Hattie (2009). However, if we accept that wicked problems arise in a context of social complexity then unravelling wicked problems requires a social process that transcends technical competence – important as that may be. The attempt is to resolve the gap between what is needed and what is possible. Thus, the nature of the wicked

---

\(^1\) Attached as an end note is the overview of the symposium
problems is that they continually present dilemmas as the apparent solutions are unravelled. In this paper the nature of wicked problems is addressed as they arise in relation to the bridge between research and practice, in the context of facilitated practitioner inquiry, and the ways in which dilemmas play out. The discussion acknowledges that some wicked problems are functioning at the macro level, such as “How do we scale up successful local innovation in learning and teaching in our schools in ways that benefit learners across the system?” through to those that are problematic at the micro level, for example, “What are the reasons behind student disengagement with their learning in a given school?”

In this specific paper it is my intention to examine the ways in which educational theories, scholarship and research can often have only a limited influence on practice when practitioners are struggling to come to grips with a challenge at the micro level such as the one suggested above. It will argue the difficulties encountered when we see theory and research as pedagogical tools that can directly inform practitioners about ways in which they may tackle deep and intransigent problems – i.e. wicked problems. Gibbons (1999) has argued that “socially robust knowledge can only be produced by much more sprawling socio/scientific constituencies with open frontiers”. But such frontiers are difficult to define let alone cross. This is an understanding that is well recognised by Edwards, Sebba & Rickinson (2007) when they argue that problems in practice are mutable, in that working on them produces changes in them as the range of interpretations grows when more and more participants join in the research enterprise. And here lies the rub, for while mutability may in many ways be desirable it is also the case that the research and scholarship may become unrecognizable as it is communicated further and further down the line.

Groundwater-Smith & Mockler (2009) quoted Wilfred Carr in his assertion that theory appears to be the plaything of practice. In other words, while substantial theories are seemingly treated as uncontestable they are also assimilated into practice in forms that bear little similarity to their often difficult genesis. Thus we have in relation to theories addressing cognitive operations: constructivism decoupled from Vygotsky; developmental stages treated as invariant without much attention paid to the complexity of Piaget's theories; and the recognition of multiple intelligences reduced to preferences for learning styles with little reference to the complex work of Gardner. Other bowdlerized versions of various philosophical theories such as Aristotelian theory, Marxist theory, and Habermasian theory are also invoked to support specific practices.

If indeed such theories are the playthings of practice they are dangerous toys if there is little realization of their complexity – if they are applied as nostrums to solve difficult and intransigent problems of practice. Indeed it might be argued that this can apply not only to practice in the field,
but also to academic practice. The case will be made to consider Lingard & Renshaw’s admonition for teachers to develop a more researcherly disposition in concert with their academic associates. This will be illustrated by examining the following facilitated practitioner research study undertaken within the National Partnerships Program.

**Uncovering Student Engagement in a Low SES School Community:**

In its information package for new schools within the Low SES School Communities National Partnership Program the aims are said to be to:

- Transform the way that schooling takes place in participating schools and address the complex and interconnected challenges facing students in disadvantaged communities; and
- Improve the educational outcomes of students, including the literacy and numeracy outcomes in targeted schools as well as to improve students’ transition rates to further education and employment. (p.6)

In its situational analysis the school that constitutes this case study, St Castorius², a large, comprehensive co-educational Catholic College located in a NSW coastal region, largely characterized itself as being “in a good place”. It was positively viewed by the local community and provided evidence of good attendance rates, reasonable retention into the senior years and a steady improvement in HSC results. So what was less than satisfactory about the school? In effect it could be described in Stoll & Fink’s words as “cruising” (1996: 85 – 87). Expanding on Rosenholz’s (1989) notion of moving and stuck schools the model developed by Stoll and Fink intersected two dimensions: ‘effectiveness – ineffectiveness’ and ‘improving – declining’. Cruising schools are “perceived effective by teachers, school community … and appear to possess many of the qualities of effective schools” (p.86). Nonetheless cruising schools are also ones that do not appear to add sufficient value to student achievement and the epithet is generally attached to ones in more privileged SES circumstances. So, already we have something of a wicked problem emerging – St Castorius is not in an advantaged SES area, yet it is perceived as effective by its stakeholders, but it does not achieve the results commensurable with its student population’s attributes and abilities. Why is this so?

In its representation of its student performance the school identified a number of challenges, among them:

---

² The name has been changed although there is a St Castorius, the patron Saint of Sculptors.
The balance between part time work and school study requirements is problematic in the transition from Year 10 to Year 11;

Achievement at a high standard in Stages 4 and 5 is not widespread and not confined to literacy and numeracy testing;

Students appear willing to participate in lower order, less demanding tasks but struggle with higher order thinking;

High expectations for student achievement are not held for them or by them; and

Students appear satisfied with average benchmarks rather than striving for excellence.

In sum, the students appear to be under-achieving, and engaged at only a procedural level. At the same time they are courteous, friendly, and welcoming.

It should also be recognized that they are in a geographic location that is enclave-like. It is hard for students to be independent travelers in that they are not close to major urban areas and have fewer opportunities to access a range of cultural experiences other than those that are offered by a beautiful and seductive coastline.

Among its strategies for improvement St Castorius determined that it would seek to investigate ways of increasing student engagement and motivation. It was decided to engage myself as a tertiary partner to act as a facilitator and critical friend whose role would be to introduce processes and procedures that would gather intelligence about how the students understood their world of education and how they might better excel within it. There was to be a commitment to the belief that relatively low student achievement was not fixed and caused solely by external circumstances but was a plastic phenomenon that could be re-moulded through both teacher and student expectations.

**Facilitating a Reconnaissance Phase:**

In my role as academic partner to the project the writer of this paper wished to act at as transformative facilitator rather than one whose role was merely transactional. My first task was to introduce the cross faculty team of ten teachers, the school Principal and Assistant Principal and a critical friend from the Diocesan office to the concept of undertaking a reconnaissance phase as an initial step in teacher inquiry with particular reference to consulting young people. While it is not the

---

3 At present an international team comprising myself, Nicole Mockler, Jane Mitchell, Petra Ponte and Karin Ronnerman are finishing a work to be published by Routledge that addresses the many complex challenges related to the facilitation of practitioner research. We claim that our purpose is to develop a form of practical theorising that allows the emergence of a more nuanced framing of facilitation, taking it beyond the commonplace understanding of providing assistance to the field and moving it into the realm of transformative partnerships between the academy and the field of practice, with all of the demands and uncertainties that such a relationship entails.
intention of this paper to enumerate all of the processes that were employed it is worth noting that from the very beginning participants were encouraged to record their surprises and concerns among them they noted:

- I am surprised and impressed that students are seen as a legitimate source of information.

- Many interpretations of the same piece of information. We don’t all see things the same way. (Responses: a) Dealing with this kind of complexity is always challenging. Different perceptions can grow from different histories and beliefs; b) this is what brings ‘richness’ to the table I think, and this can also be challenging. Let’s see where it goes).

- I am concerned that there is always going to be some resistance/apathy where school improvement is concerned. Such initiatives as this require full support and ownership by all involved. How do we do this? (Response: a) Resistance usually has belief behind it. I believe we should listen carefully to those who resist; b) What does it all mean? How do we put these improvements in place? Are people going to embrace change or resist? c) When people know a little about something they sometimes ‘parrot’ information rather than have a good understanding of what they are doing.)

- All parties need to feel engaged and involved, both students and staff and parents where possible. (Response: a) I agree ‘parent voice’ is an important component of deep understanding of education-related issues because it opens up the perspectives of different parties; b) Does everyone benefit from ‘improvement’? There’s more chance with consultation and discussion among all parties involved in the improvement; c) What research and evidence collection comes after the student inquiry?)

The result of early investigations with students and continuing discussion and debate was to surface significant questions regarding student motivation and engagement. Two academic papers were offered to the team: Fredericks, Blumenfield & Paris (2004) and Munns & Martin (2005). From the first of these papers the group took the point that there needed to be better informed characterisations of how students, behave, feel and think and that their investigations would assist them in developing a richer picture. From the second they understood that the phenomena surrounding motivation and engagement were neither exclusively psychological nor sociological but that central to an understanding was one of social power and that perhaps this might best be interrupted by continuing their research with their students by probing more deeply and

---

4 The process of documentation was the conduct of a ‘silent conversation’ whereby all statements could be responded to by other participants.
systematically. In effect they were developing the researcherly disposition argued for by Lingard and Renshaw (2010).

A number of small inquiries were developed by sub-groups and presented for discussion by the whole team, for example the goal of one sub-group was to develop a deeper understanding of what makes for effective learning from the perspective of the students. The group wanted to understand what makes the learning enjoyable, fulfilling, memorable, and important. Thus two groups of 7 students from Year 10, were identified for focus group inquiry. In advance, they are asked to “prepare” by bringing an artefact (e.g. photograph, work sample, product, journal entry etc) that reminds them of a time when they have learned really effectively, when they were proud of their achievement. They were asked to “tell the story of the learning”. Students were given prompts, for example: “What was happening at the time; how would you rate the level of enjoyment, what did you learn and why was it important to you, how would you apply this learning to another situation?” and so on.

A second group explored the experiences of a sample of those students who appear to sit in the middle of the bell curve of achievement and who are perceived as often ‘invisible’ in the classroom. These Year 9 students responded to a survey and set of scenarios regarding engagement and working with the teachers to make sense of the results. Thus, the students were assisting in the interpretation of the results. It was also decided to hold discussions of the results with more senior students and ask them to reflect on whether these results hold true for them to this day and why or why not.

A third group also worked on a survey with another sample of Year 9 students, with three stages to their inquiry: firstly students responded to the items, secondly they were interviewed in pairs regarding the results; and finally the participating students met in focus groups to discuss emerging issues.

Throughout the year a number of discussion papers have been developed by myself that draw together the various inquiries and suggest further readings and ways forward. Discussion papers concluded with provocations that the team could consider in preparation for the next meeting. For example after considering Lumby’s (2011) paper on secondary school students’ enjoyment of school and of learning that suggested that enjoyment stems more from social relations than from deep and profound engagement with substantial learning tasks the group was asked to consider:

“Part of the issue of enjoyment stems from teachers’ own perspectives on their work – while we are not, at this point, investigating teachers’ beliefs, views and experiences it may be worthwhile to do some personal reflection on what you attach to the importance and value
of your actions as a professional. How engaged are you, what do you know about your own motivations in teaching, what are you learning about yourself as you work to identify issues from the students’ point of view.

**Developing Action Plans**

From provocations such as this and ongoing discussions regarding student responses a number of actions emerged. From a recent meeting a range of proposals have been forthcoming as demonstrated in this email extract from myself:

We talked about ways of documenting the impact of change both for students and teachers. L. pointed out the great value of students maintaining a journal that can reveal both achievements and struggles. "It can open their eyes" while at the same time opening the eyes of teachers. Also "minute papers" at the close of a lesson or sequence of lessons where students might note such matters as: what excited them; what was new for them; what they did not understand; what should the teacher do next to help their learning. I suggested that, for staff, we could collect Most Significant Change stories as a strategy for recording some of the benefits of the work for this year. A. has forwarded the full PDF on the process and I have attached some examples from both a teacher and a brief report drawing on students’ narratives.

We came back to the matter of finding ways to define success both in terms of progress and achievement across a number of areas including being a productive member of the school community. It was suggested that this could be well managed through focus group enquiry with a range of Stage 5 students. I have also attached a paper on "Focus Groups can be fun!" Students could contribute to the discussion regarding how to define and recognise success and even a group keeping a "success journal" (I thought afterwards it could be a class effort following N.'s example of the ways in which her students came to recognise small successes and achievements in her class).

We discussed the gratitude reading that I had sent (Howells, 2004)\(^5\) and it was agreed that having a gratitude orientation can be a powerful antidote to negativity. We looked in particular at the concept of "self talk" and the proposal that we can reorient ourselves and our students to reflect on positive experiences and ways of expressing appreciation for them. It was suggested that the starting point to a gratitude project could be to solicit stories

---

\(^5\) Although the reading drew upon work in tertiary students it was also supplemented by more recent extracts from leadership in schools literature.
from colleagues taking an "each one reach one" approach. A question was "how can we foreground and showcase gratitude as a central practice at St Castorius?"

P. reminded us during our far reaching discussions that our first focus is on student engagement. Clearly, working on ways of defining success, thinking about effort, ambition and achievement and conceptualising gratitude and using strategies such as student observation and student consultation will all contribute to enhancing student engagement, motivation and satisfaction.

Within days of the meeting and the email recording its conduct a number of proposals were in circulation.

I have been trying to think of an idea for a project on how we can research gratitude within our school. Both N. and I are considering extending the work we have already completed with our year 9 religion classes and focus on allowing the students help construct ways for improving gratitude within our school.

Also, I have come up with an idea for a 'litmus test', in order to establish our current levels of gratitude within the school. To put it simply, I am thinking of emailing all of year nine (since they have been a focus group so far) and asking them to nominate candidates (not themselves) that is students who they believe should be thanked for their efforts in our school community.

The criteria for nominations would not be based on achievements, but rather for their positive impact on the school environment, with the possibility for those nominated students to receive a commendation award. When nominating a student, they would have to justify their reasoning for the nomination.

Information I would hope to gather from this exercise would be -- whether students had the actual energy to reply and show gratitude; are the nominated students actually worthy of receiving gratitude or would it resolve in a popularity contest; reasons or actions within our community that are deemed worthy of gratitude, etc.

Hopefully we could take the results and further on the initiative. Please let me know your thoughts on whether the task is worthy or not. Or if there are any other ideas for establishing knowledge on gratitude within the school.
A number of replies were circulated among them:

Sounds like a great idea. What about asking the students what would be an expression of gratitude for them? By that I mean we may think showing gratitude it is a certificate they may enlighten us by saying............. and visa versa HOW do they express gratitude, especially the boys. P.

P. I also like your ideas of how they express gratitude and what they see as meaningful expressions of gratitude.

With my 9s and 10s I was going to look at the idea of what is gratitude and how do we express it just in an informal mind map style. I thought that maybe we could link it to the Discipleship unit in Year 9 RE and maybe if the other yr 9 RE classes incorporate some of these ideas, then the email about nominating students might be more widely taken up and students might think about why they are selecting their person with a little more background understanding.

I also wanted to talk to my class about what it is they are grateful for and what it is that they just expect and then if there is still gratitude even when they expect something (does that make sense)? I was then going to move on and do gratitude mandalas as one of my fortnightly spirituality tasks.

This is but one example of the ways in which ideas, arising from the range of inquiries with students are being taken up. Its relevance to dealing with ‘wicked problems’ is also manifest. What began as a concern for engagement and motivation has opened up into a series of related concerns, among them the questions “how do students value what is being learned and taught, how can that value be demonstrated and how does the concept of gratitude related to students being substantively engaged in their learning?” These questions could not have been anticipated at the commencement of the reconnaissance phase. As it was argued at the beginning of this paper the nature of the wicked problems is that they continually present dilemmas as the apparent solutions are unravelled. The first solution to lack of engagement was suggested as a lack of effort, then it was imagined to be a lack of recognition for success that has now morphed into the effects of gratitude. Clearly no one theory could have presented this trajectory. What is required is an adaptive capacity not only on the part of the school based participants, but also on the reflections of myself as academic partner. I had based my own conceptualisation of the challenge to be faced
by St Castorius College as one in relation to student engagement and the “cruising school”. Might it be that I was also playing with theory and being blinded to the priorities of the school and its students.

The Adaptive Capacity to Address ‘Wicked Problems’

In a recent paper given to the New South Wales Teacher Education Council (Groundwater-Smith, 2011) I wrote of the work of Bellamy (2006) who nominated the kind of adaptive capacity that is required to address natural resource management within the complexity of federal and regional policies and which can be seen equally to apply to the education enterprise as a human service that faces complex and difficult challenges. It is claimed that each of these desiderata have been employed in the interests of investigating the challenges facing St Castorius College.

- **Participatory**: that is the engagement with stakeholders being inclusive of the range of values of people involved or affected by decision-making, seen as critical for building trust and legitimacy;

- **Deliberative**: accommodating to debate, dissent, mediation and negotiation. Critical for developing shared understanding and trust and enhancing adaptive capacity;

- **Multi-layered**: not necessarily neatly hierarchical but able to handle scale-dependent governance challenges and territorial or sectoral cross-boundary interactions and coordination. Critical to adaptive responses at appropriate levels;

- **Nested**: involving multiple centres or authorities for creating opportunities for understanding and for servicing needs in spatially heterogeneous contexts. Critical for providing flexibility for adapting to local contexts (i.e. knowledge, values, community capacity for action and social and environmental conditions) and creating appropriate learning and decision-making opportunities;

- **Accountable and responsive**: relating to both local communities and higher authorities in terms of decisions and actions that are responsive to changing circumstances, performance, knowledge and societal objectives and preferences. Critical to efficiency and adaptive capacity of regional natural resource management to respond to and shape change in the long term;

- **Just**: that is, social justice in relation to the distribution of benefits and involuntary risks. Critical to enhancing the adaptive capacity of vulnerable groups and society as a whole; and

- **Well informed**: embracing new forms of knowledge to deal with complexity and uncertainty associated with change in interconnected social and natural systems. Critical to social acceptability and adaptive governance capacity.

Goddard (2006) argues that in recent years the Federal and State governments have initiated partnerships that engage the ‘third sector’ as a way of mobilizing resources to address ‘wicked
problems’ in the delivery of services through a recognition of common goals and shared responsibility for outcomes. The example that she uses is that of employment services, but it is possible to also see these arrangements applying to education with the plethora of partnership programs that have evolved in recent years such as the National Program on the Quality of Teaching and Learning (NPQTL) and more explicitly in this case the National Partnerships Program. For these are programs where research, policy and practice meet.

Conclusion Playing with Practice
The title of this paper has been “Is Theory formulation and Research the Plaything of Practice?” In many ways the case that has been presented here as a micro example of dealing with a ‘wicked problem’ has been a demonstration of practitioners, including academic practitioners, learning to be playful with educational theory and research as they investigate what seemed at first to be an intransigent problem of student disengagement. So, while the paper has concerns about theory being a mere ‘plaything’ it concludes that being ‘playful’ may be to engage with what John Keats has nominated as “negative capability”.

The Romantic poet John Keats (1795-1821) coined the phrase ‘Negative Capability’ in a letter written to his brothers George and Thomas on the 21 December, 1817. In this letter he defined his new concept of writing:

I mean Negative Capability, that is when man is capable of being in uncertainties, Mysteries, doubts, without any irritable reaching after fact and reason.

What Keats did was strive to accept the aesthetic of beauty for what it is. What the formulation of “wicked problems” does is ask us to try and accommodate to contradictory aspects of the complex practices of education instead of an “irritable reaching out” to quickly find the “best solution”.

Symposium Overview:
In the symposium we argued that researching and theorising educational practices is to research ‘wicked problems’ and that, furthermore, connecting research and scholarship to practice is also a challenging and difficult business. Drawing on the work of Rittell (1973, 1982) Conklin (2005) asserts that wicked problems are not about technical complexity such as may be found in an engineering problem but about social complexity where the intricacies arise from the dynamics of working with others. Rittell proposed that one cannot understand the problem until a solution has been formulated; a solution that, in turn, presents a new problem that must be understood in context. Thus, since there is not a definitive problem, there is no definitive solution. Solutions are not ‘right’ or ‘wrong’ (best or second best) they may be ‘better or worse’, ‘good enough or not good

---

6 This reference was brought to my attention by a member of the team.
7 http://h2g2.com/dna/h2g2/A813962 Accessed 10th November, 2011
enough’. Every problem has unique or novel characteristics.

Knight and Page (2007) quoting Laurence J. Peters have argued that “some problems are so complex you have to be highly intelligent and well informed just to be undecided about them”. They are, in effect, wicked problems. Complexity alone is not sufficient to warrant a problem being defined as ‘wicked’. Admittedly there are challenges that are complex, but nonetheless can be solved in a systematic linear manner and which can be ‘tamed’; for these the appellation does not apply. The tame problem is where the situation is seen as stable; there is a definitive end point; the solution can be evaluated; and, it belongs to a class of problems that have been solved in a similar manner.

Some would believe that by studying a problem we can tame it; more often than not, in educational research leading to practice, by conducting a meta-analysis of the solutions that have arisen across multiple studies. However, if we accept that wicked problems arise in a context of social complexity then unravelling wicked problems requires a social process that transcends. technical competence – important as that may be. The attempt is to resolve the gap between what is needed and what is possible. Thus, the nature of the wicked problems is that they continually present dilemmas as the apparent solutions are unravelled. In the symposium we both addressed the nature of wicked problems as they arise in relation to the bridge between research and practice and the ways in which dilemmas play out in practice.
References


