Quality teaching; ‘Classroom Pedagogical Alignment’ and why teachers teach as they do

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Abstract: This article presents the results of an observational study of eight experienced teacher classroom practices and of those teachers’ comments on why they teach as they do. Sixty-one observations and coded analyses, using the New South Wales Quality Teaching model, were made of pedagogical strategies as they taught in social studies classrooms in Australia. Collaborative interviews were held following communication of observation results. Interpretations were made of what influenced classroom practice. ‘Classroom Pedagogical Alignment’ was found to be a key explanatory factor with standardised tests and teacher accountability measures limiting the freedom teachers believe they have to teach for excellence.

Keywords: pedagogy; quality teaching; curriculum alignment; secondary education

Introduction

Teacher change research literature encompasses a wide variety of approaches to running an effective school that is financially efficient and in which students learn well. Educational policy approaches are primarily focused on increasing standards and regulations, teacher accountability, articulating curriculum, maximising learning time, increasing school-level management, increasing strong district and principal leadership and rethinking the organisational structures of schools (Buchanan, 2012; Connell, 2009; Desimone, Porter, Birman, Garet, & Yoon, 2002; Ingvarson & Rowe, 2008; Slavin, 2002). Additionally in recent years an increased emphasis has been placed on the qualities of the teacher in the classroom as an important factor that can also improve student learning outcomes (Gore & Ladwig, 2006a; Gore, Ladwig, Amosa, & Griffiths, 2008; Griffin, McGaw, & Care, 2012; Ministerial Council on Education Employment Training and Youth Affairs, 2008; Newmann & Associates, 1996; Queensland School Reform Longitudinal Study, 2001; Ramsey, 2000; Roelofs & Terwel, 1999; Vinson, 2002). Nevertheless, despite multiple avenues of inquiry, research into best practice in teacher change is littered with stories of failure and sustainable change remains largely elusive (Hargreaves & Fullan, 1998; Hargreaves & Goodson, 2006; Sarason, 1990).

This study provides a glimpse into why this may be so (Edge, 2012a, 2012b). Testing and accountability regimes current in most nations encourage teachers to apply a large amount of power over what their students learn. Teachers feel the need to avoid distraction, to keep to key learning points, to dissuade excursions down non-examinable tracks. Student self-direction and self-reflection are not seen as important when the teacher is being judged on what students can exhibit in their tests. The teacher aligns all elements of the classroom context to further the endpoint outcome – a test score that purports to represent student-learning outcomes. The assumption is that tighter ‘links’ or ‘coupling’ need to exist between educational policy (e.g. curriculum and assessment) and how teachers’ teach (Goldspink, 2007; Rowan, 2002). It may all seem so efficient but it creates mediocrity. It removes independent teacher ability to allow students to learn in other ways and on other topics. It
reduces learning to a fixed set of facts and skills. Classroom Pedagogical Alignment is a defensive, minimalist teaching strategy.

**Background to the study**

One of the central questions facing education systems and educational researchers is how to improve student-learning outcomes. This reasonable query has led to much scrutiny of impact of effective school management and teacher quality on student achievement (Buchanan, 2012; Gore & Ladwig, 2006a, 2006b; Pickering, 2007; Vinson, 2002). In Australia, the ‘The Better Schools Plan’ (the Gonski Report) (Australian Government, 2013) focused on improving five core areas of schooling: quality teaching, quality learning, empowered school leadership, meeting student needs and greater transparency and accountability; and providing funding to those who are most in need of such support. Finland, which is seen as having a very successful education system, values the early recognition of learning difficulties, social and/or behavioural problems with professional support provided to students as early as possible (Sahlberg, 2011) and this has influenced some of these Gonski reforms. Additionally the recent formation of the Australian Institute for Teaching and School Leadership (AITSL) (Australian Institute for Teaching and School Leadership, 2012) has provided a framework of teacher standards and promoted classroom-focused professional learning. In New South Wales (NSW) in 2012 the Department of Education and Communities (DEC) focused policy directions through the ‘Great Teaching and Inspired Learning’ initiative (New South Wales Department of Education & Communities, 2012a, 2012b, 2012c), and the Queensland College of Teachers (Queensland College of Teachers, 2012) likewise argued that teachers need to be developed, supported and rewarded to create inspired learning and lifelong capacities in students and that this was required in pre-service teacher education as well as during their careers to develop content and pedagogical skills to support effective teaching. However, schools are dynamic, unpredictable and non-linear organisations operating in an ever changing external environment and it is difficult to predict which factors will influence a teacher’s instructional decisions (Cohen & Stewart, 1995; Lemke & Sabelli, 2008; Mason, 2008a, 2008b) despite important evidence of how crucial individual teacher decisions are to student outcomes (Hattie, 2003).

Educational policymakers at all levels have pressed for substantial change in the technical core of schooling, actual classroom instruction, and there has been a move to specify more precisely what teachers should teach. Increased teacher accountability for student learning framed on standards and calibrated by state-wide testing has become more common (Plank & Condliffe, 2013; Spillane, Parisi, & Sherer, 2011). The notion of ‘coupling’ has been used to frame our understanding of the strength of links between the institutional environment such as external administrative bodies and classroom instruction. There are advocates for both ‘loose’ and ‘tight’ coupling of these facets of education (Aurini, 2012; Bidwell, 2001; Goldspink, 2007; Hallett, 2010; Plank & Condliffe, 2013; Powell & Colyvas, 2008; Spillane, et al., 2011). ‘Loosely coupled’ classrooms are relatively independent of administrative oversight, supposedly producing variable goals for classroom instruction with little evidence of direct connection between classroom practice and student achievement as defined by the educational administration (Hallett, 2010; Rowan, 1990, 2002, 2006; Spillane, et al., 2011). Current perceptions are that ‘tight coupling’ between the administration of education and classroom interactions can create legitimacy and support classroom practice, drawing support from notions of ‘constructive alignment’ (Biggs, 1996; Biggs & Tang, 2007; Jones, 2006; McLoughlin, 2001) and ‘curriculum alignment’ (Richardson, 1998; Rowan, 1990, 2002). In this context, ‘alignment’ is defined as the extent to which curricular expectations and assessments are in agreement and work together to
provide guidance for educators’ efforts to facilitate students’ progress toward desired academic outcomes (Roach, Niebling, & Kurz, 2008).

The principles of ‘constructive alignment’ were developed by Biggs (1996) and are primarily located within the higher education literature. ‘Constructive alignment’ is a means of verifying and ensuring that learning objectives are aligned with both the teaching activities and assessment to measure the level of students’ achievement in a course (Biggs & Tang, 2007; Jones, 2006; McLoughlin, 2001; Vitale, 2010). In the broader educational context, these principles are consistent with ‘outcomes-based education’ (OBE) where “standards are stated upfront and teaching is tuned to test and meet them, assessment being the means of checking how well they have been met” (Biggs & Tang, 2007, p. 5). From a similar perspective, ‘curriculum alignment’ involves a standardised system of input and output controls over curriculum goals, instructional materials and predetermined testing benchmarks for students (Richardson, 1998; Rowan, 1990, 2002). Within this paradigm, standardised textbooks, framed around syllabus content knowledge and skills serve as ‘input controls’ and guide teachers’ decisions about instructional processes. ‘Output controls’ involve standardised tests that are centrally developed and uniformly administered and scored to assess student achievement (Boyd & Crowson, 2002; Graham & Neu, 2004). This highly rationalised approach to education views teaching as a ‘routine technology’ where centralised decision making and standardised work practices are adopted to promote efficiency by focusing teachers’ efforts on clearly defined goals (Rowan, 1990). It would seem to follow that accountability in the education system is a major aim of ‘curriculum alignment’ (Graham & Neu, 2004).

Opinions differ as to the impact of these mechanisms on student learning outcomes and instruction. There is some evidence that high-stakes testing has increased student achievement (Ayres, Sawyer, & Dinham, 2004; Dee & Jacob, 2009; Jacob, 2005; Neal & Schanzenbach, 2010; Spillane, et al., 2011; Wong, Cook, & Steiner, 2009) while other evidence indicates that these initiatives have little lasting impact (Fuller, Wright, Gesicki, & Kang, 2007; Koretz, 2008; Lee, 2006). Further, Plank and Condliffe (2013) reported that classroom quality is lower when teachers are under pressure to improve student test performance. Recent research in neuroscience (Christoff, 2008; Clement & Lovat, 2012; Immordino-Yang, 2008; Immordino-Yang & Damasio, 2007; Snow, 2008) offers some support to the latter point of view, with one researcher making the point that the “development of skills that are goal directed are modulated by a convergence of social and emotional reactions and desires, as well as cultural knowledge” (Immordino-Yang, 2008, p. 71) and consequently not easily attuned to standardisation. Social and emotional reactions are a source of variability between learners and as Snow (2008) argues, it is important to design pedagogical and assessment tools that test and develop students’ functional abilities without penalising them for constructing knowledge in different ways. Further, while ‘curriculum alignment’ is seemingly appropriate for school improvement and effectiveness, critics have argued that such controls reduce the professional autonomy of teachers and this may not increase educational ‘efficiency’. Windschitl (2002) argued that ‘curriculum alignment’ reinforces teacher-centred or objectivist approaches rather than student-centred approaches to teaching and discourages teachers from spending time inquiring into their own practices. It also can be seen as limiting teacher commitment to change as they feel disempowered, deskilled and de-professionalised, denied the capacity to make a difference in their classrooms (Goldspink, 2007; Rowan, 1990; van den Berg, 2002). It may be possible to clarify such fundamental differences of opinion by entering classrooms to identify influences on instruction and explore teachers’ perspectives on such influences.
The context of the study

This study was undertaken in secondary Stage 4 and 5 Human Society and Its Environment (HSIE) classrooms in one region of NSW in Australia. The HSIE Key Learning Area (KLA) covers a wide range of Humanities and Social Science subjects. History and Geography occupy the majority of HSIE teaching time in these Stages, where students are typically aged between 13 and 15 years. New South Wales is the largest state of Australia with the newly named NSW Department of Education and Communities (DEC) providing the education for approximately 760,000 students in 2228 public schools. The NSW curriculum is developed by the then NSW Board of Studies (now the NSW Board of Studies, Teaching and Educational Standards or BoSTES) and delivered through seven Key Learning Areas or KLAs in six stages (Stages 1-3, K-6; Stage 4, Years 7/8; Stage 5, Years 9/10 and Stage 6 Years 11/12). The BoSTES is a quasi-autonomous government body with responsibility for curriculum, assessment procedures and teaching registration in all schools, including the private sector. At the time this study was undertaken the HSIE curriculum requirements and assessment procedures (including the outcomes-based School Certificate external examination and discontinued in 2012), which directly influenced the classrooms in this study were outlined in the Stage 4/5 History and Geography syllabus documents (New South Wales Board of Studies, 2003a, 2003b). Commercially-developed textbooks written to meet curriculum requirements usually guided teachers’ decisions about instructional processes and were widely used. Within schools, in meeting accountability requirements, syllabus standards were reported through A to E achievement scales described in the Curriculum planning and programming, assessing and reporting to parents K–12: policy standards document (New South Wales Department of Education & Training, 2006) and the School Certificate at the time of the study involved standards-referenced external examinations that judged student achievement in relation to these syllabus outcomes as well as teacher judgment as to which prescribed descriptor best described the achievement of that student (New South Wales Board of Studies, 2005a, 2005b).

Research approach

This study had a mixed methods design in two sequential phases (Edge, 2012a, 2012b). The study addressed two research questions:

1. What variation in pedagogy is exhibited in classroom instruction in Stage 4/5 HSIE classes in NSW public secondary schools, based on repeated classroom observations?
2. How do teachers’ perceptions about the organisational design of schools influence their choice of classroom instructional practices?

The first phase of this study was based on 61 observations and coding of observed pedagogy, using the NSW Quality Teaching model (NSWQTM) and its three dimensions of good teaching (New South Wales Department of Education & Training, 2003a, 2003b, 2003c, 2003d). Participating teachers became involved after an invitation outlining the purpose of the research and information about what they would be asked to do, the time involved and privacy issues relating to data collection was sent to teachers in a single DEC region to the north of Sydney. The region was chosen purely for reasons of access but it did provide a mix of city and regional type schools and perspectives and was often used as a test case region for many commercial surveys. Eight HSIE teachers from five public secondary schools accepted the invitation. Of the participants, four were HSIE Head Teachers, one had been relieving as a Head Teacher HSIE for over twelve months and one was a Head Teacher...
Administration. The other two teacher participants each had over 26 years of teaching experience. They could thus be described as experienced teachers.

Models of pedagogy, as guides to good teaching practice, have been part of educational discourse for some time. In this study, the NSWQTM (see Table 1) was the model of choice as it incorporates a pedagogy that constitutes good classroom practice based on research carried out in a broad range of real classrooms, it was embraced by the NSW DET at the time, and it was used in NSW classrooms as a tool to self-monitor teachers’ classroom practice (Ladwig, 2005). The key features of the NSWQTM are as below:

Table 1: The dimensions and elements of the NSWQTM.

<table>
<thead>
<tr>
<th>Intellectual Quality</th>
<th>Quality Environment</th>
<th>Learning</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep knowledge</td>
<td>Explicit quality</td>
<td>Explicit quality</td>
<td></td>
</tr>
<tr>
<td>Deep understanding</td>
<td>Engagement</td>
<td>Engagement</td>
<td></td>
</tr>
<tr>
<td>Problematic knowledge</td>
<td>High expectations</td>
<td>High expectations</td>
<td></td>
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<tr>
<td>High-order thinking</td>
<td>Social support</td>
<td>Social support</td>
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<tr>
<td>Metalanguage</td>
<td>Students’ self-regulation</td>
<td>Students’ self-regulation</td>
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<tr>
<td>Substantive communication</td>
<td>Student direction</td>
<td>Student direction</td>
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</table>

The Intellectual Quality (IQ) dimension is the central pedagogy of the NSWQTM and is the dimension that has survived essentially unchanged from the original work on Authentic Pedagogy in the USA (Newmann & Associates, 1996). Such pedagogy focuses on producing deep understanding of important, substantive concepts, skills and ideas, treats knowledge as something that requires active construction, requires students to engage in higher order thinking and to communicate substantially about their learning. In developing a Quality Learning Environment (QLE), teachers need to work productively to set high and explicit expectations where the focus is clearly on learning. In creating Significance (SI) teachers need to make clear connections with contexts outside of the classroom and students’ prior knowledge and identities, including cultural perspectives. Creating Significance helps to make learning more meaningful for students.

Classroom observation data relating to single teacher class-cohorts was gathered repeatedly over a 10-week period (between late July and early October in 2004) by direct observation on a weekly basis, one observation per week with the same class, same teacher (n=61). The quality of pedagogy was assessed using the instruments developed in the document; Quality Teaching in NSW public schools: A Classroom Practice Guide (New South Wales Department of Education & Training, 2003d). The item rating scales (ordinal scales scored on 1-5 Likert scale) allowed the researchers to make distinctions based on whether or not the quality in question is observed, how many students were engaged in that manner, and for how much of the lesson (Ladwig, 2005).

The second, qualitative, phase of research took place between April and June 2005 and after the researcher and teacher participants had discussed the first phase results, both individually and collectively. The research strategy of semi structured interviewing was undertaken to exhaustively pursue the key understandings of the participants on the central issues. It allowed them to express their opinions (Fontana, 2002; Olson, 2011) and provided an avenue for further discussion of their classroom teaching experiences with a sympathetic listener. Data collection involved undertaking one formal, individual, semi-structured interview of about 45 minutes with each of the participants recorded electronically. Data analysis involved an inductive process. The interviews were transcribed and a broad ‘open
coding’ approach based on Strauss and Corbin’s (1998) grounded theory and N.VIVO software techniques described by Gibbs (2002) were used to identify themes.

Phase 1 classroom observation results - Unexceptional teaching

The individual teachers’ dimensional results are reported in Table 2 and the individual teachers’ results are reported in Table 3. In the interpretation of the results each of the dimensional construct scores (Table 2) needs to be considered relative to the mid-point (18). When coding using a 5 point observation scale, with ‘1’ being the minimum (absence of element) and ‘5’ being the maximum (sustained and frequently occurring element), the dimension scores range between a low of 6 and a high of 30, so the mid-point is 18, rather than 15, as would be expected with a 0-30 range.

Table 2: Dimensional scores - Individual teachers.

<table>
<thead>
<tr>
<th>Dimension/Teacher (N=61)</th>
<th>Ms Norris (N=9)</th>
<th>Mr Jones (N=10)</th>
<th>Mr Tyler (N=8)</th>
<th>Mr Brown (N=6)</th>
<th>Mr Dennis (N=8)</th>
<th>Mr Sutton (N=5)</th>
<th>Ms Smith (N=8)</th>
<th>Mr Wilson (N=7)</th>
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</thead>
<tbody>
<tr>
<td>School</td>
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<td></td>
<td>Cedar Ridge HS</td>
<td>Cedar Ridge HS</td>
<td>Mountain View HS</td>
<td>Mountain View HS</td>
<td>Blue Ridge HS</td>
<td>Blue Ridge HS</td>
<td>Cherry View HS</td>
<td>Red Ridge HS</td>
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<tr>
<td>Mean (Std Dev)</td>
<td>Mean Std (Dev)</td>
<td>Mean Std (Dev)</td>
<td>Mean Std (Dev)</td>
<td>Mean Std (Dev)</td>
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<td>Mean Std (Dev)</td>
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<tr>
<td>Intellectual Quality</td>
<td>14.22 (2.949)</td>
<td>14.20 (0.919)</td>
<td>14.38 (2.264)</td>
<td>13.17 (2.137)</td>
<td>17.13 (1.642)</td>
<td>13.80 (1.643)</td>
<td>16.13 (2.532)</td>
<td>13.71 (0.951)</td>
</tr>
<tr>
<td>Quality Learning Environment</td>
<td>13.22 (1.563)</td>
<td>14.40 (1.838)</td>
<td>15.50 (2.138)</td>
<td>15.50 (1.871)</td>
<td>19.00 (2.00)</td>
<td>16.00 (1.225)</td>
<td>18.25 (2.375)</td>
<td>17.00 (2.449)</td>
</tr>
<tr>
<td>Significance</td>
<td>17.67 (1.936)</td>
<td>16.10 (1.595)</td>
<td>17.00 (1.309)</td>
<td>14.67 (2.422)</td>
<td>17.88 (1.356)</td>
<td>18.60 (2.074)</td>
<td>14.00 (2.268)</td>
<td>14.71 (1.254)</td>
</tr>
</tbody>
</table>

Therefore, a dimension scoring below 18 was not very visible in the lessons coded; the appearance of its elements was uneven or only occurred once in a clear and unambiguous fashion. In the interpretation of the individual teacher results, the elements scores fall into one of four ranks. That is, ‘high-range’ (mean scores between 4 and 5: element frequent and sustained), ‘mid-range’ (mean scores between 3 and 4: element frequent but not necessarily sustained), ‘low mid-range’ (mean scores between 2 and 3: element visible) and ‘low range’ (mean scores between 1 and 2: element effectively absent).

Of the eight teachers observed, Mr Dennis achieved the highest individual mean score for Intellectual Quality (mean=17.13; std dev=1.642) with the highest scores for deep knowledge, deep understanding, and substantive communication. Mr Dennis also achieved the highest individual mean score for Quality Learning Environment (mean=19.00; std dev=2.00) with the highest scores for engagement, high expectations, students’ self regulation, knowledge integration and connectedness. The least successful teacher in promoting Intellectual Quality was Mr Brown (mean=13.17, std dev=2.137). However, Mr Brown scored the highest for student direction. The most successful teacher in creating Significance was Mr Sutton (mean=18.60, std dev=2.074). Mr Sutton had the highest scores for problematic knowledge, background knowledge, inclusivity and narrative.
In developing a Quality Learning Environment the least successful teacher was Ms Norris (mean=13.22, std dev=1.563) with Ms Smith being the least successful in creating Significance (mean=14.00, std dev=2.271). However, Ms Smith scored more highly then the other teachers on higher-order thinking metaleanguage, explicit quality criteria and engagement. Mr Brown scored the highest for student direction, with Ms Norris having the highest score for cultural knowledge. Mr Wilson scored highly on social support.

It was obvious that ‘successful’ teaching was a complicated matter and each teacher had different ways of approaching it. However overall, the findings seemed to indicate that these HSIE teacher participants appeared to be ‘teaching defensively’ (by analogy with ‘driving defensively’) or were ‘playing it safe’. The scores of all teachers were not high and were not low either. That is, the teachers seemed bound by their perceptions of external demands and were being very careful in their pedagogy, taking a controlling role in the

<table>
<thead>
<tr>
<th>Elements/Teacher (N=61)</th>
<th>Ms Norris (N=9)</th>
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<tr>
<td>Deep Knowledge</td>
<td>3.11 (0.333)</td>
<td>3.00 (0.471)</td>
<td>3.13 (0.354)</td>
<td>3.17 (0.408)</td>
<td>3.88* (0.354)</td>
<td>3.20 (0.837)</td>
<td>3.38 (0.744)</td>
<td>3.00 (0.000)</td>
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<td>Deep Understanding</td>
<td>2.78 (0.471)</td>
<td>2.60 (0.516)</td>
<td>2.63 (0.518)</td>
<td>2.33 (0.516)</td>
<td>3.38* (0.518)</td>
<td>2.80 (0.447)</td>
<td>2.75 (0.463)</td>
<td>2.57 (0.535)</td>
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<td>Problematic Knowledge</td>
<td>2.00 (0.866)</td>
<td>1.80 (0.919)</td>
<td>2.38 (0.744)</td>
<td>1.67 (0.861)</td>
<td>2.00 (0.926)</td>
<td>2.40* (0.548)</td>
<td>1.75 (0.707)</td>
<td>1.43 (0.535)</td>
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<td>Higher-Order Thinking</td>
<td>1.67 (0.707)</td>
<td>2.10 (0.316)</td>
<td>1.75 (0.707)</td>
<td>1.67 (0.516)</td>
<td>2.63 (0.518)</td>
<td>2.20 (0.447)</td>
<td>3.13* (0.354)</td>
<td>2.14 (0.378)</td>
</tr>
<tr>
<td>Cultural Background</td>
<td>2.11 (0.782)</td>
<td>2.10 (0.316)</td>
<td>2.25 (0.463)</td>
<td>2.00 (0.632)</td>
<td>2.38 (0.518)</td>
<td>1.00 (0.000)</td>
<td>2.50* (0.535)</td>
<td>2.00 (0.000)</td>
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<tr>
<td>Communication</td>
<td>2.56 (0.726)</td>
<td>2.60 (0.516)</td>
<td>2.45 (0.463)</td>
<td>2.33 (0.516)</td>
<td>2.88* (0.345)</td>
<td>2.20 (0.447)</td>
<td>2.63 (0.916)</td>
<td>2.57 (0.535)</td>
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<td>Explicit Quality</td>
<td>1.00 (0.000)</td>
<td>1.30 (0.483)</td>
<td>1.38 (0.518)</td>
<td>1.33 (0.516)</td>
<td>1.63 (0.744)</td>
<td>1.00 (0.000)</td>
<td>2.50* (0.756)</td>
<td>1.71 (0.448)</td>
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<td>Engagement</td>
<td>2.11 (0.601)</td>
<td>2.20 (0.422)</td>
<td>2.38 (0.354)</td>
<td>2.67 (0.816)</td>
<td>3.63* (0.518)</td>
<td>3.20 (0.837)</td>
<td>3.63* (0.518)</td>
<td>2.71 (0.951)</td>
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<td>High Expectations</td>
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<td>2.20 (0.422)</td>
<td>2.38 (0.518)</td>
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<td>3.50* (0.535)</td>
<td>2.20 (0.447)</td>
<td>3.00 (0.535)</td>
<td>2.57 (0.535)</td>
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<tr>
<td>Social Support</td>
<td>3.67 (0.500)</td>
<td>3.90 (0.568)</td>
<td>3.75 (0.707)</td>
<td>3.33 (0.516)</td>
<td>4.13 (0.641)</td>
<td>3.80 (0.447)</td>
<td>3.75 (0.463)</td>
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<td>Students’ Self-Regulation</td>
<td>3.00 (0.500)</td>
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<td>3.75 (0.463)</td>
<td>3.67 (0.816)</td>
<td>4.25* (0.463)</td>
<td>4.00 (0.000)</td>
<td>3.63 (0.518)</td>
<td>4.00 (0.577)</td>
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<td>Student Direction</td>
<td>1.44 (0.527)</td>
<td>1.70 (0.675)</td>
<td>1.38 (0.744)</td>
<td>2.17* (0.753)</td>
<td>1.88 (0.641)</td>
<td>1.80 (1.095)</td>
<td>1.75 (0.463)</td>
<td>1.71 (0.756)</td>
</tr>
<tr>
<td>Background Knowledge</td>
<td>3.11 (0.928)</td>
<td>3.30 (0.483)</td>
<td>3.38 (0.518)</td>
<td>2.67 (0.816)</td>
<td>3.50 (0.535)</td>
<td>3.60* (0.548)</td>
<td>2.75 (0.463)</td>
<td>3.14 (0.690)</td>
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<tr>
<td>Cultural Knowledge</td>
<td>3.33* (0.707)</td>
<td>1.90 (1.101)</td>
<td>2.63 (1.061)</td>
<td>2.33 (0.816)</td>
<td>1.63 (0.961)</td>
<td>3.00 (0.707)</td>
<td>1.50 (0.535)</td>
<td>1.29 (0.756)</td>
</tr>
<tr>
<td>Knowledge Integration</td>
<td>1.89 (0.928)</td>
<td>1.70 (0.823)</td>
<td>2.13 (0.835)</td>
<td>1.17 (0.408)</td>
<td>2.25* (0.463)</td>
<td>1.40 (0.548)</td>
<td>1.75 (0.707)</td>
<td>1.71 (0.756)</td>
</tr>
<tr>
<td>Inclusivity</td>
<td>4.22 (0.441)</td>
<td>4.10 (0.568)</td>
<td>4.00 (0.535)</td>
<td>4.67 (0.516)</td>
<td>4.38* (0.518)</td>
<td>4.80* (0.447)</td>
<td>4.00 (0.535)</td>
<td>4.57 (0.535)</td>
</tr>
<tr>
<td>Connectedness</td>
<td>2.78 (0.667)</td>
<td>3.20 (0.632)</td>
<td>2.88 (0.354)</td>
<td>2.00 (0.894)</td>
<td>3.63* (0.744)</td>
<td>3.20 (1.304)</td>
<td>2.25 (0.886)</td>
<td>2.43 (0.787)</td>
</tr>
<tr>
<td>Narrative</td>
<td>2.33* (0.866)</td>
<td>1.90 (0.568)</td>
<td>2.00 (0.756)</td>
<td>1.83 (0.753)</td>
<td>2.50 (0.535)</td>
<td>2.60* (0.894)</td>
<td>1.75 (0.707)</td>
<td>1.57 (0.535)</td>
</tr>
</tbody>
</table>

(highest mean score*)
classroom interactions. Mr Brown scored lowest for Intellectual Quality, yet he promoted student direction. Mr Dennis scored quite highly compared to the other teachers but did quite poorly on cultural knowledge and student direction. Knowledge integration was not high and there was little explicit quality criteria evident in any of the teaching. As they considered the scores in light of their classroom observations, the researchers recognised an underlying fear of aiming too high on any one aspect of what could be perceived to be good teaching practice: the participating teachers seemed to draw back from following lines of activity that might have coded more highly, instead choosing to stick to the ‘middle of the road’ or ‘routine’ teaching. Did they think that such defensive teaching was safer? Their fears of underperformance seemed to impede teaching for excellence. To clarify our inferences the second phase of the study included collaborative interviews. Why did the participating teachers teach the way they did?

**Phase two results: ‘Classroom Pedagogical Alignment’ - Participant’s perspective of an influence on classroom instruction**

When the interview data was analysed, three of the teacher participants clearly indicated that external assessment and accountability concerns for student performance in public examinations had strongly influenced their instructional practices. These concerns are most pronounced in the following extracts:

_I think there is a big concern with most teachers about whether or not they are jeopardising School Certificate and Higher School Certificate results if they pursue Quality Teaching and learning and letting go of the content._ (Ms Smith)

_I mean someone is saying, here is a good teaching and learning strategy, but on the other hand we have all these external assessments . . . It is sort of accountability of covering your backside and getting the content down. I think the focus on teaching and how students learn is gone. Quality Teaching is the first time, in a long time that anybody has really thought about it._ (Mr Jones)

. . . _but the Quality Teaching model was probably hobbled a bit anyway because of the very nature of new HSC and Year 7 to 10 syllabi requirements (introduced in 2003) implemented in the last 5 years . . ._ (Mr Brown)

There was a preoccupation in completing the mandated curriculum requirements, with an emphasis on coverage of content rather than in depth understanding. In most instances in faculty programs the instructional strategies were primarily designed to help teachers complete the mandated knowledge and skills and unlikely to promote Quality Teaching.

To address concerns about student performance in both internal school assessments and in externally administered School Certificate (SC) and Higher School Certificate (HSC) examinations aligning syllabus knowledge and skills and assessment with teaching was seen as a solution. In Ms Smith’s HSIE faculty, teacher designed worksheets were developed to deliver syllabus knowledge and skills (deep knowledge) consistently across all years. Marking rubrics containing standards for students to individually and collectively assess the quality of their work were developed and displayed in rooms (explicit quality criteria). By focusing on explicit quality criteria, students were seen to be able to develop a deep understanding of the subject knowledge and skills (deep knowledge) to enhance the Intellectual Quality of student’s work.
programs are aligned with the Quality Teaching framework and what is happening on a day-to-day basis in the classroom is also aligned with certain instructional tasks . . . some other things, we have also used, because the school is concerned about SC & HSC side of things we designed some rubric posters using the SC & HSC rubrics. (Ms Smith)

. . . We also put together some resource folders together so that teachers are teaching the curriculum much more consistently and what we are trying to do is much more explicit (deep knowledge) . . . not just for the students but also for the teachers, so there is much more consistency and the resource folders designed to align content and assessment. (Ms Smith)

Some felt that these approaches clearly constrained their practices:

. . . Yes and there are many constraints that teachers keep coming against . . . Think about a plan of getting rid of the School Certificate, or get rid of the HSC and if you feel about actually teaching and getting rid of subjects, don’t break us up into little blocks of time scattered over the fortnight, if you really want to do stuff. . . . Everything should be up for grabs, syllabi, exams and teachers’ workloads the whole lot if they really want to restructure. Now everything has become too assessment orientated. (Mr Jones)

The teachers expressed reluctance to take risks in the pursuit of Quality Teaching, as they believed they would jeopardise student results in the School Certificate and Higher School Certificate examinations. Similarly, Mr Jones recognised that ‘external assessments since 2000 had increased accountability for student performance that restricted peoples’ willingness to have a go and take risks with new teaching strategies’. Completing syllabus content was seen as central to address accountability concerns with instructional practices focused on standardised textbooks and in doing so controlling what was taught in classrooms. From these teachers’ accounts, there was a fear that low performances was unacceptable and this fear seemed to impede the use of teaching strategies that would encourage higher-order thinking and so make high level performances in externally administered exams unlikely.

From these findings, it would seem that these HSIE teachers were aligning curriculum, assessment and classroom instruction in their classrooms in response to meeting what they understood of externally mandated curriculum requirements and predetermined testing benchmarks in externally administered assessments including the NSW School Certificate and Higher School Certificates. The external syllabus documents provided teachers with room to move, but concern for the impact of external examinations on the prospects left open to their students, and on their own standing within school and region, seems to have discouraged these experienced teachers from taking advantage of it. This finding is consistent with the influence on teachers and teaching of ‘constructive alignment’ and ‘curriculum alignment’ with the teachers’ finely tuning instructional practices in the classroom context to meet perceived external accountability requirements. The researchers termed this process ‘Classroom Pedagogical Alignment’ or CPA arguing that it involves the purposeful alignment of subject content, instruction and assessment in classrooms in response to teacher perceptions of mandated curriculum requirements and testing benchmarks in externally administered assessment. It is strongly linked to conceptions such as ‘constructive alignment’ and ‘curriculum alignment’ but it is individually classroom based and so offers a new insight into how teachers implement alignment. Importantly, in understanding classroom
practice, CPA rests on teacher perceptions of external pressures rather than on the actual nature of those pressures.

‘Classroom Pedagogical Alignment’ and observed classroom practice: Mr Jones and Ms Smith

To better clarify the influence of CPA on the pedagogy of classroom practice the coding descriptors from *Quality teaching in NSW public schools: A classroom practice guide* (NSWDET, 2003d) and elements scores for Mr Jones and Ms Smith were linked. In examining the **Intellectual Quality** of their lessons, both teachers had mid-range means for *deep knowledge* (Ms Smith - mean = 3.38; Mr Jones - mean = 3.00). A mid-range mean for *deep knowledge* implies that the teachers focused on the key syllabi concepts with only occasional superficial or unrelated ideas. Low-range mean scores for *problematic knowledge* (Ms Smith-mean = 1.75; Mr Jones - mean = 1.80) indicate that the *deep knowledge* was transmitted static knowledge and only open to one interpretation. Further, *substantive communication* had low mid-range means (Ms Smith - mean = 2.63; Mr Jones – mean = 2.60) with classroom discussion following a typical ‘initiate-respond-evaluate’ or IRE pattern with low level recall. Although not a comprehensive indicator, the mid-range mean (mean = 3.13) for *higher order thinking* suggests that Ms Smith students were mainly performing lower order thinking with at least one significant higher order question during the lesson. On the other hand, for Mr Jones a low mid-range mean (mean = 2.10) meant that students were primarily involved in routine lower-order thinking with higher-order thinking as a minor diversion. In both classrooms *metalanguage* was not a priority with low mid-range scores (Ms Smith - mean = 2.50; Mr Jones - mean = 2.10). In these teachers’ lessons terminology was explained, however, neither the teacher nor the students stopped to make judgements or comments on the language. *Deep understanding* for both teachers had a low mid-range score (Ms Smith - mean = 2.75; Mr Jones - mean = 2.60) indicating an unevenness in understanding with students demonstrating both shallow and *deep understanding* at different points in the lessons. Further, as students’ *deep understanding* was shallow and uneven it could be argued these instructional practices were not overly effective. Overall, instructional activities routinely involved students in lower-order thinking, in the recalling of factual information and in defining subject specific terminology.

In promoting a **Quality Learning Environment**, given these HSIE teachers’ accountability concerns for student performance in school and public examinations, *explicit quality criteria* should have been prominent. However, in Mr Jones’ classroom, as with all the other HSIE teachers in the study, *explicit quality criteria* coded in the low-range (mean = 1.30) with only general statements provided by the HSIE teachers to the students regarding the desired quality of their work. Ms Smith’s classroom exhibited *explicit quality criteria* coded in low mid-range (mean = 2.50), the highest of all the teachers. However, there seemed to be some confusion by Ms Smith about the type of teaching required to support this Quality Teaching element as there was little or no evidence of students using the criteria demonstrated to examine the quality of their own work. Instead the explicit quality criteria appeared to be for the teacher’s benefit with implications for student ownership of their own achievement. The low range scores for *student direction* (Ms Smith – mean = 1.75; Mr Jones - mean = 1.70) supports this view with students having minimal control over the choice of activities, the time spent on activities, the pace of the lesson or the criteria by which the students’ work would be assessed. In Mr Jones’ classroom the relatively low mid-range mean (mean = 2.20) indicated that student *engagement* was sporadic with off-task behaviours that signalled boredom and a lack of effort. Alternatively, in Ms Smith’s classroom, a mid range mean (mean = 3.63) indicated that *engagement* was widespread with most students on-task
and trying hard most of the time. Both teachers scored in the mid-range for self-regulation (Ms Smith – mean = 3.63; Mr Jones - mean =3.10) with students demonstrating initiative in regulating their own behaviour. High expectations in Ms Smith’s classroom scored in the mid range (mean = 3.00) with many students participating in challenging work during at least half of the lesson, while the low-mid range score (mean = 2.20) suggests that only some students participated in challenging work in Mr Jones’ lessons. In Ms Smith’s and Mr Jones’ classroom building positive relationships between the students and the teacher was important with Social Support scoring in the mid-range (Ms Smith – mean = 3.75; Mr Jones - mean =3.90). Both teachers encouraged their students to take an interest in their work, and to contribute to group tasks and help other students. Overall with respect to Quality Learning Environment teacher-centred instruction was seen as better suited to complete the mandated History and Geography syllabi content and skills requirements. Importantly, with teacher-centred instruction usually involving routine tasks, some students may not have found the work very challenging (high expectations) with high levels of social support needed for students to regulate behaviour (self-regulation). Further, it could be argued teacher-centred instruction contributed to the variability in student engagement and the low levels of explicit quality criteria observed.

In creating Significance, a concern for student welfare was central with both teachers scoring in the high range for inclusivity (Ms Smith - mean = 4.00; Mr Jones - mean = 4.10). In their classrooms students from all cultural and socio-economic backgrounds were valued for their contribution to the work of the class. However, in both teachers’ classrooms, knowledge integration (Ms Smith - mean = 1.75; Mr Jones - mean = 1.70), cultural knowledge (Ms Smith - mean = 1.50; Mr Jones - mean = 1.90) and narrative (Ms Smith - mean = 1.75; Mr Jones - mean = 1.90) scored in the low-range. These scores indicate that the knowledge in lessons was mainly restricted to the HSIE subject topic area they were studying, that narratives were used on occasion as a minor part of the lesson; and that while some cultural knowledge was evident it was treated in a superficial manner. Students’ background knowledge for Ms Smith scored in the low mid-range (mean = 2.75) with Mr Jones scoring in the mid-range (mean = 3.30). In these classrooms background knowledge was mentioned or elicited briefly, was connected with the substance of the lesson and there was at least some connection to out-of-school knowledge. Further, in Mr Jones’ classrooms the mid-range score for connectedness (mean = 3.20) indicated that the students recognised some connection between classroom knowledge and the situations outside the classroom, but they do not explore the implications of these connections. In Ms Smith’s classroom the low mid-range score for connectedness (mean = 2.25) indicated that while the teacher or students were trying to connect what was being learned to the world beyond the classroom, but the connections were weak, superficial and trivial. Thus making meaningful connections between other topics or between other subjects/KLAs (knowledge integration) was a minor consideration with cultural knowledge treated in a superficial manner. With a focus on completing subject content knowledge and skills, exploring student background knowledge was common, although narratives were a minor part of lessons. In creating value beyond the classroom (connectedness) the work students were doing served only as a level of competence or compliance to meet formal schooling and subject content completion requirements.

Implications and concluding comments

Overall, in linking these Stage 4/5 HSIE teachers’ comments to the classroom observations there was evidence that CPA strongly influenced the instructional bench marks for Quality
Teaching. The notion of CPA involving the ‘linking’ or ‘tight coupling’ of education policy, curriculum and assessment to external examinations to promote efficiency in classrooms, perhaps unwittingly, focused these HSIE teachers’ instructional practices on risk-averse strategies to address accountability concerns. They became technicians of accountability. The findings from this research suggest that with increasing accountability from governments and society, teachers view themselves as being ineffective and are feeling and behaving as ‘deskilled technicians’ in classroom instruction.

Some of the neuroscience–based research provides insights of solutions to such a bleak picture (Clement & Lovat, 2012). For example, Immordino-Yang’s (2008) research indicates that educators need to consider varying learning pathways for learners that involve “explicit consideration of the perceptual, motoric, and socio-emotional aspects of the skill to be constructed” (p. 71). Further, building on Immordino-Yang’s work, Christoff (2008) argues that in education learning is all too often ‘solution oriented’ and there needs to be a greater emphasis placed on teaching that develops students skills to actively solve problems from different perspectives. Snow (2008) also notes that while there are many common or ‘easy way’ strategies to support learning, teachers need to be mindful of alternative lesson designs, based on learners own goals, to achieve similar outcomes. In terms of lesson design, there are numerous examples in the literature including, de Bono’s Six Thinking Hats (1985), Gardiner’s Multiple Intelligences (1993), Universal Design for Learning (Rose & Meyer, 2006) and Singer’s Integrated Structural model of math teaching (Singer, 2007). Thus students can be encouraged to achieve particular skills by different individual pathways. This is a much more complex teaching situation than a simple skills and knowledge attainment model (suggested by Classroom Pedagogical Alignment) to be assessed via set, predetermined outcomes and requires a professional teaching approach.

The primary objective of this study was to advance research in the field of classroom teaching and teacher change by gathering data to illuminate the quality of pedagogy in classrooms and the reasons for this classroom pedagogy. There is a need to determine exactly what the teacher does in the classroom in order to better understand just what kind of teaching we want to deem as high quality (Ladwig, 2005). This study provides direct evidence of what happens in classrooms and it is of concern that teachers feel the need to use classroom practices that are at the very least moderate in effectiveness and not strive for excellence because of accountability procedures. ‘Classroom Pedagogical Alignment’ is only of value if what is being aligned is quality pedagogy and represents a sophisticated understanding of 21st century learning.

References


Immordino-Yang, M. H., & Damasio, A. R. (2007). We feel, therefore we learn: The relevance of affect and social neuroscience to education. Mind, Brain and Education, 1, 3-10.


