Reforming Practice for Young Adolescents: Lesson from a Study of a Middle School in a Queensland K–12 School

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A study of middle school ecology and its effects on teacher practices raised various pedagogical and methodological issues beyond the actual study of how teaching teams in a Queensland school viewed new practice in a trial that started in 1999. Three synergistic issues for emerging practice and research on that practice were noted. Simultaneously, teachers were working in a new school, implementing new practice, and integrating new policy. The successes and failures of innovation, therefore, may reflect newness of many kinds.

Introduction

Middle schooling is an attempt to address changing developmental needs of young adolescents and to extend the integrated learning environment of the child learner into the adolescent years. The transition from a highly supportive environment to one of compartmentalised subjects and various teachers can be turbulent, although transitional issues may involve student ambivalence about care versus independence, pedagogical shifts from process-driven learning to content-driven learning, and problems that are based in students’ immersion in a large, anonymous high school (Yates, 1999). Large-scale, longitudinal research on the transition to a high school setting has shown that the traditional secondary school environment is not very responsive to emerging adolescent developmental needs (Eccles, Roeser, Wigfield, & Freedman-Doan, 1999). A middle phase of schooling was aimed to smooth this transition and to provide developmentally appropriate educational opportunities for young adolescents.

Middle schools have been an established part of western educational systems since the 1980s in the UK (Taylor & Garson, 1982) and in the USA (Beane, 2001; Powell & Van Zandt Allen, 2001). When traditional practice reappeared in American middle schools, there were second-generation efforts to revitalise middle school practice (Dickenson, 2001). Middle schooling in Australia also emerged in the 1980s amongst a few innovative schools and developed in the 1990s into a priority issue at national and state levels (Hill, Mackay, Russell, & Zbar, 2001). Australian staff in schools involved in the Innovation and Best Practice Project (IBBP) reported optimism about the prospects for middle school improvements. However, they were also cautious about the enormity of the challenges involved in changing longstanding and strongly guarded practices and arrangements (Hill et al., 2001).
Reimagining Practice: Researching Change

Education Queensland announced a decision to "actively promote schools that combine primary and secondary years…[in order to] reduce the difficulties for students in moving from primary to secondary schooling" (Annual Report 1999–2000, p. 37). Education Queensland initiated five middle school trials in 1997 in which schools were encouraged to adapt policy to local needs. With the first Queensland teachers who have specialist training in middle school graduating at the end of 2003, the middle schools in the Queensland trials have been staffed with teachers with either secondary or primary training. Many of the identifying practices said to characterise the middle school have posed a paradigm shift for these teachers.

Translation of policy into practice in one specific Queensland trial raised questions about research on practice reform. Some issues concerned the physical setting up of a new school and the effects that a set of extra stresses and pressures relating to the establishment of a new school can introduce into the reform process. Some issues concerned the brainstorming of middle school practice for a specific context from the literature on recommended practice for the middle school (Carnegie Council on Adolescent Development, 1989; Davis, 2001), the processes used to identify effective practices, and the way in which practice by teachers in a middle school trial in one location has been disseminated to other teachers in the process of introducing a middle phase of schooling. Some issues concerned the competition between the demands of reform of teaching practices for a middle school setting and the demands of reform of other aspects of the pedagogy and administration such as reform of assessment and the approach that teachers take to coordinating these demands.

The present study

Teachers working in one Years 6–9 middle school at an outer Brisbane P–12 school participated in a single-site study towards the end of the 2002 school year. This middle school program has operated for about 3 years. There were approximately 540 students. Of the 21 teachers, seven teachers were completing their first year at this school. Six teachers had spent 3 years in the middle school, and seven teachers had spent two years in the middle school, with two of these teachers having taught one year in the junior school. (One teacher did not participate due to other commitments during data collection but demonstrated an ongoing interest in the project.) Although all (n = 21) agreed to participate, 20 teachers actually participated in one of the three phases of research activities.

In this study, the mixed methodology design (Howe, 2003; Tashakkori & Teddlie, 1998) combined a preliminary quantitative analysis of survey responses with a subsequent textual analysis of small group discussions and individual teacher reflections. Data collected was undertaken in three phases: (a) survey priming to attend to middle school ecology, (b) primed group discussion among teaching teams, and (c) reflection by individual participants following team discussions (see Table 1).

It was expected that the ecological analysis of teacher views of their practice in the middle school would clarify the widely reported mix of optimism and pessimism about middle school reform (Hill et al., 2001). A brief summary of the findings, particularly in those areas on which teachers reached consensus, provides a background for closer
consideration of issues of newness and their implications for studies of practice reform that were raised in the course of this study.

Table 1

<table>
<thead>
<tr>
<th>SEQUENCE</th>
<th>PHASE</th>
<th>PARTICIPANTS</th>
<th>DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Priming survey</td>
<td>Individual ((N = 20))</td>
<td>Quantitative (numerical)</td>
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<tr>
<td></td>
<td>(5 ecological categories)</td>
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<tr>
<td>Phase 1</td>
<td>1. Environment</td>
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<tr>
<td></td>
<td>2. Teacher-Teacher</td>
<td>((n = 11))</td>
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<td></td>
<td>3. Teacher-Student</td>
<td>52% (n^*)</td>
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<td></td>
<td>4. Curriculum</td>
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<td>5. Assessment</td>
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<tr>
<td></td>
<td>Open ended question</td>
<td>Teaching team (6 teams; size = 2-5)</td>
<td>Qualitative (textual)</td>
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<td>1. 2S (^c)</td>
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<td>2. 3S</td>
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<td>3. 5P (^c)</td>
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<td>4. 3S</td>
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<td>5. 3P; 1S</td>
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<td>6. 2P</td>
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<td></td>
<td>(n = 20; 95% \text{rr})</td>
<td></td>
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<tr>
<td>Phase 3</td>
<td>Reflection</td>
<td>Individual ((n = 20))</td>
<td>Qualitative ((n = 17; 85% \text{rr}))</td>
</tr>
</tbody>
</table>

\(^a\)“The Teachers’ Practice Enjoyment Survey”, with 50 items, was designed by the first author in accordance with principles of school ecology (Gump, 1980) and teacher self-efficacy (Friedman & Kass, 2002). \(^b\)Return rate = \text{rr}. \(^c\)S = Secondary trained teacher; P = Primary trained teacher.

Survey consensus findings for individual teachers

Sets of Likert questions in five categories primed teachers to be alert to aspects of the middle school ecology (Gump, 1980) that could affect their practice. In ecological terms, reform of teaching practice needs to take into consideration the physical milieu in which the new practice is to occur, the social mix of people engaged in the new practice (e.g., combinations of teachers and students), and the programs of formal and informal engagement in that practice (e.g., how pedagogy is programmed, how assessment is performed). In this study, teachers answered questions relating to five issues: (a) physical issues about middle school environment and setting, human issues about middle school relationships (b) among teachers and (c) between teachers and students, and middle school programming issues about (d) curriculum and (e) assessment. Ratings on Likert
items and written comments about these five aspects of ecology showed consensus on improved teacher-student relationships, a perception that there was a seamless transition between grades, and agreement on the benefits of (a) collaborative learning and (b) a negotiated curriculum.

However, Phase 1 quantitative data and qualitative comments indicated some confusion about issues relating to the middle school environment and the definition of a school community. Sample size restricted the useful of these survey data except as priming stimuli for the second phase. Moreover, teachers' individual written comments in open ended responses to the survey, their subsequent discussions in their teaching teams, and their final individual reflections showed concerns about issues relating to time constraints in planning, teacher-teacher relationships, professional development, and technology. Some of these areas of confusion may be related to the simultaneous operation of several forces contributing to the newness of practice.

Team consensus findings
When six groups (n = 20 teachers) discussed the summarised results of the first phase, they showed strong support for teacher-student and teacher-teacher relationships as an integral feature of middle schooling practice. Qualitative analysis of transcriptions of group sessions identified a high level of teacher agreement on the value of improved teacher-student relationships and associated benefits for the teachers and students. Teams and individual teachers agreed that collaborative learning improved student-teacher relationships. Teacher-student relationships were reported to be stronger, and student behavior was thought to be better. Teachers attributed these benefits to "knowing the kids so well." These improved relationships enabled teachers to circumvent problems with students. "You know your kids well enough to see when the problems are starting and deal with it. You can also appeal to them if they are having a bad day."

Teams also reached consensus about the "seamlessness" of transition from the junior school to the middle school and between middle school grades. One teacher stated that "the way we actually teach doesn't change from Grade 7 through to Grade 8 [and thus] there is not that sudden change for the kids." Teachers from other teams confirmed that a seamless transition was "one of the big success stories of middle schooling" and that, in relation to a seamless transition, middle schooling had "done its job well." However, some teachers expressed concern that, in a P–12 school, the transitional problems traditionally experienced when moving from a primary to secondary school setting may have just been delayed until the transition to senior school which has continued to be taught in 45 minute, subject-specific lessons.

Teams and individual teachers in those teams agreed that collaborative learning improved student-teacher relationships and facilitated student independence. Collaborative learning was observed to include the teacher as a facilitator in the classroom and teacher as negotiator of student learning. "It works really well. I think that our job is really easy because we facilitate, and they do all the thinking." "The kids work through with us and often guide us in the learning. The kids feel free and comfortable to jump in and say, 'Well, you could try this.' It is very open."
According to the frequency data in the survey, negotiated learning was a beneficial part of middle schooling. All participants either strongly agreed (91%) or agreed (9%) that they enjoyed students being able to negotiate their learning. Textual data confirmed this consensus. One teacher described student negotiation as "wonderful." Another teacher commented, "Students compete with themselves rather than against one another."

However, other teachers cautioned that negotiated learning did require a significant amount of teacher control. One participant stated that negotiated learning "requires much more work on the teacher's behalf." Another stated, "Giving some students too much choice for assessment means nothing is achieved. A structure or boundaries are generally necessary." This view was also confirmed in the group data: One team of teachers commented that they "don't give their kids too much choice." Teachers concerned about structure and boundaries were all high school trained teachers who wanted to be able to "compare apples and apples."

Other findings, other issues
Other findings of the study revealed a number of conceptual and methodological issues that needed to be addressed in research on middle school. In particular, changes of many kinds were occurring simultaneously. A fundamental problem in educational reform has been "the overwhelming multiplicity of unconnected fragmented change initiatives" (Fullan, 1997, p. 217) and "the balkanization and burnout of passionate reform-minded teachers" (Fullan, 1997, p. 217). Moreover, teachers engaged in educational reform can become exhausted as they fail to make any significant difference beyond their own classroom (Elmore, 1996). Some of these issues were affecting teachers in this school.

Macropolicy changes, such as outcome based education, the use of rich tasks, and a strong focus on the use of technology were being implemented at the same time as the new school was being set up. Teachers in this new environment were performing and reconciling many major and minor activities for a "new school", "new policy", and "new practice for middle school." Most of these changes were exciting and new and were an integral part of the whole process of reforming their workplace.

New school
This new middle school was a holistic reform model (Apsland & Nicholson, 2003), which included the introduction of a "new and separate" tier of schooling. There was ecological novelty in the spatial and temporal milieu (e.g., new physical site, nonstandard building design, characteristic time-scheduling). The construction of a new building had opened up many opportunities. The physical environment was "clean and fresh." Each teaching "pod" was designed with two double teaching spaces separated by a "wet" area and staffroom. Arrangements of room spaces were specifically designed to accommodate distinctive programming arrangements of collaborative teaching and learning in small teams said to be characteristic of a middle school. The principal was committed to the new educational reform and had volunteered to take on the challenge. Teachers were enthusiastic. Many had been recruited (72% volunteers) to work in this new environment.
A new school creates its own issues in establishing routines and responsibilities, gathering resources, and organising times and tasks. These concerns are not all directly related to middle schooling issues. The newness of the school, the lack of an established curriculum framework, and the newness of staff to middle schooling practices contributed to time-and-task pressures on teacher practice.

Staff took time to settle. New staff needed induction by teachers who had been there in previous years: When teachers relocated to this school, they needed to join a team and engage in collaborative planning. Over time, staff turnover can disrupt emerging routines. Thus, in the 10 months since the study, 38% of teaching staff had voluntarily left. The founding principal of the P–12 school and the associate principal of the middle school also left, and new administrative leaders arrived to establish their own influence.

Lack of resources was a difficulty expressed by teachers in three teams. It was difficult to plan and teach areas of the curriculum when physical resources were not yet in place. Some teaching pods were not complete, the library and resource centre was still incomplete, and access to other facilities such as ovals was limited due to timetabling clashes with the junior school. Teachers also found specialist human resources were hard to access due to the limited number of specialist teachers and the number of classes requesting specialist time for different units. This problem caused some teachers to "rethink" their units to accommodate these shortages. It was expected that more specialist teachers would become available when the senior school offered Years 11 and 12. The P–12 school only offered classes up to Year 10 at the time of the study.

Time issues appear to be a major cause for concern for many teachers, irrespective of their previous experience in primary or secondary schools. Teachers reported many time-related problems. They had insufficient access to specialists' time: "Teachers need training and support to last in the job." They had insufficient time to communicate with other teachers about work practices: "You are separated building wise [and] you … are not really given the opportunity to even really visit other classes. Time constraints are a huge issue right across the board." They had insufficient time for professional development: "There is so much professional development needed in so many areas that sometimes it is just hard to get what you need." They had too much time required for curriculum development and school based projects: "We are just so busy with technology and everything else."

Newness can be an enjoyable experience. The time-span of physical newness of a milieu, however, is relatively short, and pleasure in the newness and the excitement of that newness may disguise problems. Additional organisational demands such as school curriculum policies in each of the learning areas, behaviour management plans, and establishment of the framework for extracurricular activities to provide a wide range of activities for students placed unanticipated stress on teachers. One teacher commented that in the last week they had "attended meetings every afternoon" and that it was not "unusual to attend several meetings either after or before school each week."

New practice
Creation of new practice for this discrete educational entity in a new physical setting was exciting and challenging for teachers. The benefits of a seamless transition and the
flexibility of a negotiated curriculum were agreed. The associated benefits of improved student-teacher relationships facilitated through programming changes were widely reported. However, teachers reported difficulties within this new practice, where a paradigm shift to their teacher training or teaching experience was raising unexpected challenges. The evolving ecological supports for reform, teaching outside one's area of expertise, managing complicated timetabling, and confronting classroom logistics, were concerns.

Under the direction of a middle school administration, teaching teams in the middle school initially worked in demountable buildings and attempted to implement team planning and teaching practices in what one teacher described as "very difficult conditions to work under." In the second year of implementation of a middle school, the first classes were able to move into the purpose built pods, which greatly enhanced teachers' ability to plan and teach as teams. During this second year of operation, the school extended the enrolment to Year 9, facilitating the multiage grouping to Year 6–7 and Year 8–9. By the third year of implementation (the year of the study), enrolments were taken to Year 10, and many of the teaching pods and specialist facilities were completed and available for use. This stability enabled teachers to broaden the scope of middle schooling practices to include more teaching specialists, which, in turn, allowed greater flexibility in enabling students to negotiate their learning. The opportunity for a closer knit "community" of middle school teachers and students was also able to begin to be established with a separate and distinct physical area.

Teaching subjects beyond their areas of expertise for high school trained teachers or teaching subjects beyond Year 7 for primary school teachers was an issue raised by most teachers. "I thought, you know—how stupid! How absolutely stupid! They want me to teach maths and what have you." Other teachers expressed reservations but viewed teaching outside of their traditional areas as an opportunity to increase their skills. "I'm looking at it as a chance to skill myself up for when I move on. I will certainly have a few more feathers to my bow."

Being given an "empty timetable" was reported as a difficulty by high school trained teachers. They were required to fill their timetable rather than following a work program and a timetable. "We got here, and we got given this empty timetable basically, and we went...ohhh...Now what do we do? How do we fill this space?" However, after a short period of time, teachers were able to adapt to having classes for longer blocks of time and commented that "now we find we run out of time more than anything else."

Classroom logistics had considerable impact on those teaching teams that comprised all high school trained teachers. High school trained teachers experienced more short-term surprises than did primary trained teachers, because the middle school ecology was apparently more unpredictable for them. One team reported, "We didn't put a lot of emphasis at the start of the year on getting the class to gel." In a traditional secondary school classroom, "they just go somewhere else after 45 minutes, so team building is not an issue." They perceived that their partial understanding of the new ecology hindered their initial effectiveness as educators. "It would have made our job easier had we been aware of that." These teachers reported that team building and class logistics were "high on the agenda in the first four weeks" of the next school year. One teacher in this team
stated, "Next year, I am going to do it so differently. I am going to really work on group work."

Dissemination of new practice

At the same time that these teachers were negotiating innovative practices, they were also disseminating their experiences to teachers from other schools that were about to embark on middle schooling. It appears that, in the absence of recognised exemplary schools, the trial schools may be represented to the wider teaching community as exemplars.

Teachers in this new middle school setting were opening their classrooms to visitors to observe their practice. Teachers were also formalising their unit plans and sharing these with other schools as exemplar units demonstrating the integration of KLAs using outcomes based assessment within a negotiated curriculum. Weekend workshops and after school seminars on middle schooling practice, subject integration, and technology were being regularly run by teachers in the school. Much of this "sharing" added to the workload of these teachers.

Sharing of school practice has been a particularly strong characteristic of Australian conferences and publications on middle schooling. Whether effective practices have been established and whether they can be appropriately translated into schools with other contextual demands (social class, size of school, etc.) has yet to be established. Whether effective classroom practices for middle schooling are different from effective classroom practices for other levels of schooling (e.g., early childhood) has yet to be established (Chadbourne, 2001). Whether effective classroom practices have been lost in the construction of middle school practices has yet to be established.

New policy

New macropolicy changes in teacher practice were occurring while these teachers were adjusting to a new school and new practice. For example, one such policy change was outcomes based assessment (Queensland Studies Authority, 2002). Outcomes based assessment is a new programming issue rather than a middle school issue of reforming the primary-to-secondary transition. This new assessment policy complemented the aims of the new practice in that it enabled students to negotiate their learning and extend their levels of achievement. It also gave teachers greater flexibility to cater for the needs of individual students. Teachers noted that outcomes based assessment did facilitate the goals of middle schooling as it enabled students to "take control and negotiate where they wanted to be."

Figure 1 presents content analysis of assessment issues arising from team discussions. This mapping of high-frequency content words and their relative location indicates the clustering of assessment issues. Four themes emerged. In the upper left quadrant, teachers discussed social aspects of assessment, which focused on the students and their learning. In the upper right quadrant, discussion was focused on the amount of time and work that was involved in assessment and the tasks that were undertaken. In the lower left quadrant, the issues under discussion related to individual subjects. These discussions were focused primarily on the difficulty in teaching outside one's area of expertise rather than on assessing those subjects. In the lower left quadrant, the teams discussed outcome
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based assessment issues. Much of this discussion concerned teaching units that covered the curriculum and the difficulties in assessing the required outcomes. The "*high" in this quadrant refers to "high school trained teachers" who generally found outcomes more difficult to assess continually over the length of a unit rather than in smaller, more frequent assessment pieces.

Textual data from team discussions was generally centred on the difficulties in assessing outcomes through a "rich task" rather than assessing through many smaller assessment pieces marked against a set of criteria. High school teachers working in the middle school who were used to multiple criterion-based assessment pieces did not cope well with the observations, anecdotal notes, and conferencing that featured in middle school assessment. One primary trained teacher reported a dialogue with a high school trained teacher, in which she asked, "Can you talk me through what sort of assessment you do?"

Yet teachers were finding it a difficult policy change to accommodate. There were several reasons. First, outcomes based assessment syllabuses were not established or implemented for all key learning areas (KLAs). Several KLAs (science, studies of society and the environment, health and physical education, technology, and the arts) were assessed on outcomes, but literacy and numeracy were still assessed according to old source book methods. Outcomes were said to be "broad and unclear." Primary trained teachers appeared to be coping better with the ongoing assessment and different types of assessment techniques necessary for recording outcomes. One primary teacher commented, "a lot of them [high school trained teachers] have no experience when it comes to outcomes in senior school as well. If they are in areas that haven't changed over, that's something that's [difficult]."

Another issue was the difficulty in reporting outcomes in a meaningful way to parents. Teachers stated that parents were more concerned about how their child was performing in the class comparatively to other students. One teacher stated that parents ask, "Where are they in the class? Are they top of the class, middle of the class, bottom of the class?" Teachers attributed this line of questioning to the inadequate training received by parents in the new outcomes reporting and felt that it was going to be difficult to change this parental mind set.

Conclusion

These changes all contributed to the pressures on teachers to identify and implement novel practices. Reforms are broadly defined in terms of innovation, originality, and freshness (i.e., newness). However, the process by which primary and secondary teachers make holistic reforms to their practice can involve many kinds of newness. Moreover, what starts out as a seamless and positive process can easily become disruptive and negative. Initial enthusiasm may generate a vibrant environment for teachers and students, and optimistic views of the outcomes may reflect this initial enthusiasm for the "new." In the selection of replacement staff, optimistic and energetic teachers may be essential to maintain enthusiasm. The sustainability of educational reform in general (Elmore, 1996) and of middle school reform in particular is known to have problems that undermine system change.
This examination of the issues involved in newness reveals a basic challenge facing the pioneers of this holistic reform model in Queensland. That is, there needs to be more "teasing out" of what are issues of new practice for this middle phase of schooling, what are issues of setting up routines for this new school, and what are issues of implementing new assessment policy in conjunction with new teaching and learning practice. Problems that are unrelated to new practice can cloud the potential for effective school reform in the middle years. The interpretability of research on middle school reform can be affected by the presence of many new and synergetic forces converging on this educational workplace.

**Figure 1.**
Word analysis from whole group utterances about assessment.

Note. Words are represented as to greatest frequency and clustered according to closer association in text.
References


