Teachers and curriculum: Insights into classroom practice

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This article reports on research that studied what occurred in primary school classrooms as teachers' planned and taught lessons across a range of curriculum areas.

It draws on observations of one teacher's interactions with her students to make generalised comments about teachers' work and examines some issues that were raised in the follow up discussions between the researchers and the teacher.

The findings show that the teacher was incredibly busy coping with the demands of a national curriculum and her classroom of mixed ability students.

Introduction

For over a hundred years New Zealand teachers have taught from a national curriculum. In the most recent *New Zealand Curriculum Framework* (Ministry of Education, 1993), seven learning areas (subjects) are identified as essential for a broad and balanced education: Language and Languages, Mathematics, Science, Technology, Social Studies, The Arts, and Health and Physical Education. These learning areas are promoted as recognisable and unique categories of knowledge and understanding "able to provide the context within which the essential skills, attitudes and values are developed" (p.8). It is the teacher's responsibility to help his or her students make meaning through the process of learning and it is left largely to teachers to determine how knowledge and understanding, skills, attitudes and values may be incorporated in school and classroom programmes.

Because there is a national curriculum it would be easy to think every teacher does more or less the same in the classroom. Strangely we do not know much about what they do, for there has been little research on this matter. So, what do teachers do as they practice the art of teaching and of helping students to learn? From research into effective schools and effective teaching it is known that the professional practice of teaching is complex and multi-faceted and that the critical factor in any learning environment is the teacher. Costa and Leibmann (1997) have drawn attention to the changing role of the teacher as it has shifted from information provider towards catalyst, coach, innovator and researcher who works collaboratively with the learner. Therefore, in any study of how teachers and students interact it is important to consider the complexity of classroom culture.

This article outlines some research that looked into classrooms and how teachers worked in them. The teachers who offered to participate in the research were considered by their professional colleagues to be effective and able to demonstrate current learning theories in their classroom practice. They said that they felt comfortable with researchers having access to their classrooms, as they were keen to learn more about themselves as teachers and their teaching approaches. The students in their classrooms provided a gender balance of children diverse in age (6, 7 and 8 year olds), and of numerous ethnic and cultural backgrounds.

Data were gathered on how teachers engaged the students in learning from the national curriculum; the patterns of interacting with the students; the organisational and management strategies: and how teachers facilitated learners' cognitive development, for example, the types of questions teachers asked and the statements that they made. It was the researchers' intention to keep the research environment as naturalistic as possible and because it was of personal professional interest it was undertaken at minimal cost.

Nevertheless, the researchers were able to record the general events of the lessons and the teachers' interactions and pupil activities through the use of observations. After some experimentation a written running log describing what was recurring in a lesson was kept and the various shifts in the lesson were timed, for example, from whole class discussion to small group work and vice versa.

A record of the frequencies of verbal and non-verbal teacher-pupil interaction was kept along with the frequency and type of teacher questions and statements, and the organisational arrangement for grouping for learning (whole class, small group and individual). Each lesson was followed by informal discussion between the teacher and the researchers to keep the teacher informed of the research process.

At a later date at the completion of a series of several observed lessons, teachers were interviewed in a somewhat more structured way. These interviews allowed the researchers to share their combined set of notes with the teachers and enabled the teachers to reflect on their teaching. Thus, observational records and a taped interview provided a basis for an analysis of teaching and learning.

From the observational notes and the recorded interviews several points about teachers' classroom practice can be made, about planning and teaching lessons across several curriculum areas. In the discussion that followed the observed lessons several factors were identified as having a major influence on this teachers' work. Therefore, some issues relevant to curriculum planning and teaching can be raised.

While other teachers were involved in the research, in this short article data from the observations and interviews of one teacher form the basis of the points that are identified below.

Teaching involves numerous interactions between teacher and student

The observational records of interactions revealed that the teacher was constantly engaged in a high number of interactions. It was noted that the interactions were spread widely across the children and as a result no child was engaged in more than several interchanges with the teacher in any lesson. For recording purposes an interaction was defined as a separate interchange between teacher and student: for example a teacher asked a question and a student answered. Both verbal interactions and non-verbal interactions in which the teacher conveyed messages to children through the use of facial expression or body action were recorded.

When the data were shared with the teacher she was amazed at the high number of verbal and non-verbal interactions that had occurred and stated that she had no idea just how numerous these were. When her attention was drawn to the 50 verbal (quite apart from the non-verbal ones) interactions that occurred in a 15 minute period the teacher commented 'no wonder I feel tired at the end of the day'. Indeed, on several occasions the teacher connected her teaching practice and a state of personal physical and mental exhaustion.

Teachers develop patterns and phases in their teaching

Early in the classroom observations it became quite evident that there were distinct patterns of movement and interactions in particular lessons. The researchers were able to quickly identify distinct lesson phases and there was common agreement as to what constituted a lesson phase. It was defined as a coherent section of a lesson such as pupils working individually at a learning task while the teacher moved to interact with particular students. Interestingly, when the teacher's attention was drawn to what seemed to be a teaching pattern of regular phases that had been developed, the teacher appeared quite unconscious of these phases and patterns that the researchers saw as quite distinct.

Therefore, the researchers were curious to know if the patterns might change according to either the curriculum area or according to the age and ability of the children. The teacher considered that she would probably start all of her lessons with everybody talking about what they were going to do and this would be followed by an activity. This was to allow her to go around and work with anyone who needed help. She thought that the only difference would be the activity part of her teaching which would involve either individual or small group work.

Because the teaching phases and patterns seemed to be repetitive for all lessons across several curriculum areas the researchers asked about the physical education programme and if the teacher thought that the same pattern would apply. Upon thinking about how she taught this subject the teacher realised that she usually sat the children on the mat area to give instructions and would talk about what the children were going to do before moving to activity outside the classroom. Thus the pattern was most likely to be repeated regardless of the curriculum area taught.

The demands of a national curriculum contribute to complexity

The lessons that were observed involved children in various learning activities and there was a high level of time on task across the class. As well as some whole class teaching the children often worked independently and it was obvious that they had learned a set of routines. These included signalling to the teacher for help and responding to teacher contact at some points in that phase of the lesson.

All the observed lessons moved at a rapid rate. It was evident that the teacher, in order to cover a large number of objectives and to satisfy the need for adequate coverage of content, had to rush to complete the allotted learning tasks. It was clear that the demands of a national curriculum challenged this primary teacher and the expectation that she should cover all the learning areas at every class level contributed to her feeling of being 'overwhelmed'.

Teachers' work is influenced by wider school policy and practice

The school's policy and practices had a huge influence upon the teacher's planning and curriculum implementation. In this urban school it was accepted practice for groups of teachers to plan together. However, the interviews revealed that group decisions linked to planning did not always sit comfortably. For example, the teacher talked about a situation that had arisen in which a school syndicate had talked at length about their mathematics programmes. As a result of the discussion she believed she had been told exactly how she was to teach mathematics and how

she was to organise her groups. She shared with the researchers that she had really struggled to teach in the manner that had been outlined by the teacher syndicate for the organisation of groups. The expected approach, she believed, was "like teaching three separate programmes". For her part she preferred a different style that involved the whole class but having different activities. In the model that she thought that she was expected to adhere to she struggled because "there was too much organisation, too much happening at once". Instead, she preferred her own organisational strategies that involved all children in an introductory session and although she acknowledged "while it might appear organised chaos" it was easier for her to manage because she "knew what was actually happening".

These tensions were also apparent in situations where some teachers dominated the planning process or where unit plans were prepared with little prior consultation. The teacher commented that it was hard not being part of the early planning stage because she really needed to think things through "in my own way". She claimed that it was easier to plan for herself from the outset because she then "knew what was actually happening" and she liked her planning to be left "open-ended".

Teachers tend to work in isolation in their classrooms

While the teachers often planned together it appeared that this teacher had had little opportunity to observe other teachers at work, particularly in classrooms. The teacher commented that she didn't think that she had seen many other classrooms since her pre-service final block practicum. In response to the researchers' prompts, she claimed that she mostly saw other teachers working when they were teaching outside, (on a sports day, for example), or when she "popped into" another teacher's room. This limited contact did not really allow her to "get a feel" for another teacher's practice. The researchers asked her if it was possible for teaching in the classroom to be a rather lonely occupation despite the fact that teachers were around people all day. The teacher agreed that teaching was "rather paradoxical" in this respect.

Teaching is inextricably tied up with behaviour management, children's well-being and organisational strategies

The researchers were impressed with the positive working tone that had been developed in the classrooms and the well-established work habits of the young primary students. While the learning behaviour was closely managed and maintained there was no evidence of corrective programmes or interestingly, of reward incentives. When asked about this aspect of her classroom practice, the teacher replied "if you expect that you are going to get it [good behaviour] they [the children] will do it". She also had a class rule that she needed to be able to control the class with her voice without shouting and that the "children know that and I have explained to them why". Thus it appeared that the teacher's expectations had set the positive working 'tone'.

The running log of events recorded incidents linked to children's well-being that the teacher needed to give her attention to. In one afternoon session, for example, as the class settled after lunch there was consternation when one child was 'missing'. Eventually it was discovered that the child had gone to the dental nurse. Further interruption for two more children to go to the dental nurse soon followed. As the teacher introduced the science lesson one of the boys reported a 'sore' foot. After investigation the injury appeared serious enough for the teacher to need to contact the school receptionist to ask the child's mother to be contacted. Mid way through the afternoon session the teacher needed to talk briefly with the parent who had arrived to collect her child.

In this afternoon science session organisational matters and instructions tended to dominate the group investigations. There was constant supervision and management of children and the necessary equipment and resources that were required. The teacher moved constantly, scanning the classroom, questioning and redirecting children. At the end of the session instructions for tidying up, putting away equipment and settling on the mat area dominated. The cleaning up procedures had to be repeated several times for one group "at the yellow table where there was a lot of playing and not much tidying up going on".

This was a complex and well-planned lesson but it was a teaching and learning situation in which the teacher really needed the support and assistance of a laboratory assistant or teacher aide. Furthermore, the teacher's desire to leave a tidy room suggested that a good relationship with the school cleaners was necessary. At the end of the session the teacher told the children that 'the clean up wasn't too bad' but that "if they see the lady who cleans up our room please say we are sorry we have made such a mess". The 'tidy up' phase at the end of this session meant that time did not allow for a satisfactory completion to the lesson and that the topic and experiment findings would have to be returned to in the future.

Class size does make a difference

A long-standing issue in teaching is the connection between class size and student achievements. The teacher argued that class numbers did make a difference. She shared that in the previous two weeks there had been periods when she had worked with half her class (that is fifteen children rather than thirty) while one half of her class had gone to the computer room. During the repeat teaching with the second group she had noticed that "there was a lot less management" when there was not such a big group of children. This aspect was borne out by evidence from recording the number of interactions with children during different lesson phases. In one phase of 22 minutes of individualised and small group work, the teacher visited and was able to interact with every child at least once, and several times with some students, when the class size was reduced. More importantly, the researchers' notes showed that the questions that were asked and statements that the teacher made were learning related rather than linked to the management and behaviour of the children when working with the full class of thirty children.

Conclusion

McGee (2001) emphasises that one of the professional tasks of a teacher is the responsibility for the curriculum. He argues that there is enormous scope for teachers to be involved in curriculum decision making even though they have to work within the boundaries of curriculum guidelines. For most teachers their involvement in curriculum is at the school and classroom level but as this case study indicates teachers' work is quite problematic. The planning and implementation of the national curriculum involves more than cognitive development of their students. There are a number of reasons for this.

Firstly, teaching is complex and multifaceted. The classroom observations revealed this clearly. They showed how incredibly busy teachers are when trying to cope with the demands of a classroom of mixed ability students. As a way of coping, a teacher will develop particular classroom strategies and patterns of teaching. In the case of the teacher in this article she had developed a dominant lesson pattern regardless of the subject taught. A whole class introduction to a topic and instructions on how to carry out a learning activity or activities was followed by dispersal to seats to do the activity individually or in smaller groups. Each lesson concluded by a whole class phase to consolidate learning and to publicly report on achievements. However, there were several occasions when this concluding phase was not achieved. Instead, as in the other classroom observations, it became dominated by management and organisational matters simply because the teacher ran out of time.

Secondly, the teacher communicated with her students for a variety of reasons, employing a number of different communication modes. There is no doubt that student numbers limited the level of interaction and the available time for teacher contact with individual children. It was clear that the potential for sustained teacher student interactions was reduced as class size increased. This meant that the teacher often emphasised procedural and organisational matters rather than cognitive content. Consequently organisational strategies frequently dominated children's learning. Teaching and learning thus became a set of routines, a matter explained in detail by Jackson (1968) many years ago.

Thirdly, teachers need to ensure that their class functions in a stable, focussed and well-behaved manner. This teacher was no exception. During the lessons there was periodic reinforcement of valued behaviour and reminders about accepted practices. This raises the issue of conflict between the desire to foster children's learning and attention to learning tasks, and a perceived need for the effective management of the children's behaviour. This conflict was very much in the mind of the teacher in this case study.

Fourthly, the demands of the national curriculum made the teacher's work complex, especially as each subject has numerous achievement objectives. Although the teacher had planned and prepared diligently, unplanned factors disrupted or interrupted teaching and learning in daily classroom life. The teacher had to look after a myriad of matters that were not learning related but linked to children's well-being. Yet the teacher mostly worked alone in her classroom with little contact with other teachers or technical support. Paradoxically she was required to comply with the group expectations of her syndicate of teachers at the school level, a matter that created tensions for her as an individual.

This case study confirms that curriculum delivery is not unproblematic

The above issues relating to this case study teacher were also applicable to other teachers who had been observed. Furthermore, although some of the complexity of this teacher's practice was readily observed, the situational nature of her work meant that she was performing many interactions that were not always visible, tangible or quantifiable to which Connell (1985), Clandinin and Connelly (1996) and Hargreaves (1994) have drawn attention.

Finally the importance of the classroom and school environments in fostering or inhibiting learning cannot be overstated. While a national curriculum provides a framework, individual teachers interpret it according to the situational context. This suggests that it is fruitless to look to administrators to make decisions about how teachers and students work and learn together (Barker, 2001). Therefore, it is essential that in any study on how teachers teach and how children learn consideration must be given to the complexity of classroom culture. Surprisingly there has been limited research into teachers' everyday classroom practices in New Zealand. There is an urgent need for further investigations of teachers at work in their classrooms.

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