TEACHERS' WORKPLACE LEARNING

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Introduction

This paper reports on a Schools Council project which aims to show how a better understanding of teachers' workplace learning might contribute to improving the quality of teaching in Australian schools. The key issues explored in the literature review, which is the basis of this paper, are "quality of teaching", "workplace learning" and "teacher learning and development". From the literature review and a research project involving 74 schools across three states, a model of teachers' workplace learning was constructed. The project concluded with recommendations for enhancing the workplace learning of teachers and ways by which such learning might be recognised and accredited.

Teachers' workplace learning is viewed as an essential component of the overall professional development of teachers. It occurs largely in school settings and involves the transformation of knowledge, values and beliefs into classroom practice. It includes both informal and planned learning, often involves input from others such as academics or consultants and has the intention of improving the quality of teaching. Whilst there appears to be a general recognition of the significance of teachers' professional development for improving the quality of teaching, little attention has been given specifically to the workplace learning of teachers.

Quality of Teaching

For the past decade, perhaps since the publication of Teaching Quality (DES, 1983), there has been worldwide interest in this issue. Questions about improving the quality of teaching are now central to the broader question of improving the quality of schooling in Australia as well as overseas (OECD, 1989). Whilst the debate has recently become more focused on teaching, what is clearly evident is that the issue of quality continues to be a vexed one.

Our review of the literature reveals a number of different approaches to understanding and improving the quality of teaching. An overview of these is provided in Table 1.
Table 1
Some Approaches to Improving the Quality of Teaching

<table>
<thead>
<tr>
<th>Approach</th>
<th>Sources</th>
<th>Major Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Improving Theory</td>
<td>Stones (1992)</td>
<td>A theory of teaching should be based on the psychology of learning</td>
</tr>
<tr>
<td>and Knowledge</td>
<td>Schulman (1987)</td>
<td>&quot;Pedagogical content knowledge&quot; should be identified</td>
</tr>
<tr>
<td>Base of Teaching</td>
<td>Carter (1992)</td>
<td>Emerging conceptions of teachers' knowledge and how people learn to teach</td>
</tr>
<tr>
<td>(b) Context and</td>
<td>Hargreaves (1988)</td>
<td>To move away from &quot;transmission&quot; teaching</td>
</tr>
<tr>
<td>Conditions of Teaching</td>
<td></td>
<td>there is a need to improve the context, status and professional recognition of teaching</td>
</tr>
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<td></td>
<td>Bacharach et al (1986)</td>
<td>Teachers need increased resources, opportunities for decision-making, communication and support</td>
</tr>
<tr>
<td>(c) Developing a</td>
<td>Schon (1983,1987)</td>
<td>Professional practice can be improved by &quot;reflection-in-action&quot;</td>
</tr>
<tr>
<td>Reflective and</td>
<td>McDonald (1986,1992)</td>
<td>Recognise teaching as an &quot;uncertain craft&quot; and learn to read teaching through journal writing and reflection</td>
</tr>
<tr>
<td></td>
<td>Reynolds (1992)</td>
<td>Determine what beginning teachers should know and</td>
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</table>
be able to do

Louden (1992) Developing competencies
and standards for the
teaching profession

Workplace Learning

The literature to be reviewed in this section concerns learning in the workplace. Marsick (1987) advances a broad definition of workplace learning which includes interpersonal and contextual influences on what is learned:

Change and the actions of learners are central to this definition of workplace learning. This process goes beyond merely learning new actions, to examine the reasoning and social context which produces the action or change. Much learning is a by-product of some other activity, is experiential and non-institutional.

(a) The Nature of Workplace Learning

A model for understanding workplace learning includes three domains of perspective transformation (Marsick and Watkins, 1990):

Instrumental learning is job-focused and is aimed at skill development or improving individual productivity. This learning is behaviouristic and the focus of much human resource development. It relies on the assumption that skills can be isolated from their social context.

Dialogic learning includes learning about the organization and one's relationship to it. It encourages individuals to enter into a dialogue with the organization through emphasis on team relationships, coaching, mentoring, role modelling and the mission of the organization.

Self-reflective learning seeks to extend one's understanding of oneself in the workplace through confidence and competence, dealing with issues of authority and changes in personal values or beliefs and one's orientation toward the job. Watkins (1991) suggests that the logical extension of this process is for workers to engage in political struggle. Critical reflection and political involvement are two attributes of the embryonic "workplace democracy" concept. Workplace learning contributes to this development by questioning and making visible the culture of organizations. This in turn teaches workers and managers how
to enact a more democratic culture and conceivably could empower organizations to make systematic changes.

Learning in the workplace has features which may distinguish it from other sites. It

- is task focused;
- occurs in a social context characterized by status differences and the risk to one's livelihood;
- is collaborative and often grows out of an experience or a problem for which there is no known knowledge base;
- occurs in a political and economic context characterized by a currency of favours and pay for knowledge; and
- is cognitively different from learning in school (Resnick 1987; Scribner 1986).

Welton (1991) asserts that the workplace is a complex learning environment. The profound educative function of the workplace situates it as a fundamental "training site" for participatory democracy. Welton's theory of socialisation views the workplace as a far more robust place to learn than schools.

(b) Understanding Work and Learning

How can concepts of learning be applied to workplaces? The "educative workplace model" includes three propositions:

1. nonformal educational processes are potentially powerful tools for developing an educative work environment;
2. andragogical learning and empowerment theory can be adapted to the workplace; and,
3. this learner-centred approach can help us to build worker learning possibilities into our organizational designs (Kornbluh and Greene 1989).

A learning climate in which "co-learners" engage in dialogic planning within self-steering work groups is seen to develop "learned influence" rather than "learned helplessness". Organizations (in Japan, Sweden, and Norway) that build-in opportunities for workers to learn are more likely to succeed (Welton, 1991). Leymann (1989) states that people who have learned something new must have enough influence or autonomy to change the communicative infrastructure of their workplace.

There is considerable resistance within organizations to learner-centred work environments. Welton (1991: 40) reminds us that a technocratic bias pervades organizational culture and the careerism of managers and professionals is quite often
incompatible with a participatory management style. In addition, social policy as it applies to industrial relations does not necessarily embody the educative workplace model. Award restructuring and enterprise bargaining are still largely unknown quantities in terms of their implications for worker influence in the workplace.

(c) Schools and Workplace Learning

It is unusual in the literature on schools to find reference to the school as a workplace and even more unusual to find reference to workplace learning. However, as Seddon (1991) points out there is an emerging perspective which recognizes that teachers are workers involved in a labour process and schools and classrooms can be seen as workplaces.

A relational framework is adopted by Seddon to highlight three broad aspects of teachers' work:

- Teachers as workers - as with other workers, teachers are employees and their work is patterned by salary scales, avenues for promotion and status hierarchies. These shape a division of labour in teaching.
- The labour process of teaching - the relational approach views the work of teaching as being systematically produced by the social relationships surrounding the classroom. The core of teaching, getting students to learn, is a labour process without a clearly defined object (in the sense of a physical product) and is often characterised as "uncertain".
- The industrial dynamics of schools - power generates resistance and teachers, like other workers, actively confront, evade and blunt control over their work through mechanisms such as workplace unionism.

It has been argued (Tickell, 1988) that any attempt to improve the output of schooling must begin with an analysis of schools as workplaces since the workplace is such an important determinant of the work that is carried out. In his analysis Tickell concludes:

As workplaces, most schools are planned to facilitate control and supervision. They operate against any sense of community ... Demarcations between groups are strong and clear ... Technology is generally introduced in an ad hoc unplanned manner ... and the workers who use it are unprepared for its introduction (p.233).

This is not a description of a workplace that is conducive to
teacher learning. It can be argued that traditional bureaucratic school structures are accompanied by transmission approaches to teaching and learning with teachers working in isolated classrooms which discourage interaction. However, many schools are organized and operated differently and support teaching for understanding, critical thinking and lifelong learning. In such schools, the organization is designed to serve student needs and provide collaborative opportunities for teachers to learn from each other. Schools as workplaces may be characterised as "rational-bureaucratic" or "personal-communal" and it is generally those schools with communitarian characteristics (where emphasis is given to enduring social relationships and a strong attachment to a common ethos) that foster teacher learning (Bryk and Driscoll, 1988).

In a particularly pertinent piece of research reported in Teachers' Workplace, Rosenholtz (1989) examined the organizational differences between productive and unproductive schools and found far more collaboration in the former than the latter. She relied on four measures of organizational effectiveness:

1. schools' problem-solving and renewal capabilities, defined as teachers' opportunities to learn;
2. the satisfaction of individual needs and organizational tasks, viewed as teachers' certainty about their instructional practice;
3. maintaining the motivation and values of the school, as indicated by teachers' workplace commitment; and
4. school productivity, measured by student learning outcomes.

Based on those measures Rosenholtz distinguished between "moving" and "stuck" schools and school districts. Teachers in moving schools had many and varied learning opportunities while those in stuck schools had few:

In learning-enriched settings an abundant spirit of continuous improvement seemed to hover schoolwide, because no-one ever stopped learning to teach ... In contrast, most teachers in schools described as learning-impoverished lost faith in their talents and values ... Their teaching stagnated as a result.

The significance of the notion of workplace learning for teachers' work is profound. The idea of the school as an "educative workplace" for teachers (as well as students) represents a considerable advance on thinking about teachers' work.

Teacher Learning and Development
This section aims to outline recent approaches and findings in the area of teacher learning and professional development. It is now broadly accepted that a teacher's professional development should be seen as a continuum of learning and experience beginning with preservice teacher education, extending into the induction process of beginning teaching and then into life-long career development. Even before entering a teacher education course, the student teacher has had a long period of observation of teachers whilst a pupil at school and therefore comes to university with a strong sense of what teachers' work is like (Calderhead, 1988).

(a) Teacher Development and Educational Change

Fullan and Hargreaves (1992) point out that recognition of the link between teacher development and educational change is relatively new; barely fifteen years old. They identify two broad phases in the research on teacher development over the past fifteen years - the first they call the "innovation-focussed" period and the second takes the matter more deeply by considering "the total teacher and the total school". In the first phase the emphasis was placed on linking the implementation of innovations with teacher learning and as such it could be shown that teacher development was closely related to successful change. However, significant questions about this approach have arisen particularly regarding "barriers" to innovation-effectiveness which lead the authors to conclude that:

.... the innovation-focussed approach is too narrow and too weak an intervention to impact on more basic institutional conditions that must be altered if teacher development is to flourish (p.4).

A more comprehensive second-phase framework for understanding teacher development and change has now emerged. Fullan and Hargreaves (1992: 5) argue that it must take account of four main elements:

1. The teacher's purpose
2. The teacher as a person
3. The real world context in which teachers work
4. The culture of teaching: the working relationship that teachers have with their colleagues inside and outside the school.

Supporting this more contextual orientation is the work of Little (1992). She also argues that inquiry into teachers' professional development has emerged along two different paths. The first and
earlier path had to do with teachers' implementing specific pedagogical or curricular innovations and included interest in how teachers learn to teach and how they develop professionally over time. A second path, now emerging, places teachers' professional development in the context of teachers' work and seeks understanding of the connections between the social organization of teaching and teachers' learning. This line of research "attends less to discrete programmatic innovations than to the larger pattern of policies, practices, and circumstances that affect teachers' professional obligations and opportunities" (p.170).

(b) Teacher Learning

In the last decade, one of the major themes which has emerged from research on the development of teacher thinking and the craft knowledge of teachers is the inextricable link between personal and professional knowledge. In particular, the life cycle research (Sikes, 1985; Huberman, 1988) has examined teachers personal and professional lives in order to understand the nature and sources of the development of teacher thinking, actions and craft knowledge. Attention is brought to bear on "the importance of the personal nature and development of teachers' professional knowledge, the contexts in which they work, how teachers respond personally to changes in context, and how they approached their own initiatives to classroom change " (Butt et al, 1990: 256). This work is beginning to map out the sorts of conditions, contexts and experiences that facilitate teacher learning.

A more focused approach to the issue is to be found in the emerging work on "teachers as learners". This work emphasises the need for teachers as well as students to be learners in school - indeed, Barth (1990) has argued that there is an important sense in which teachers can be regarded as the most important learners in schools.

The principles of adult learning are important in his perspective. For instance, the androgogical model of Knowles (1984) suggests that a number of assumptions should be considered in relation to adult learners:

(1) The need to know. Adults need to know why they need to learn something before undertaking to learn it.
(2) The learners' self-concept. Adults have a self-concept of being responsible for their own decisions, for their own lives.
(3) The role of the learners' experience. Adults come into an educational activity with both a greater volume and a different
quality of experience from youths.
(4) Readiness to learn. Adults become ready to learn those things they need to know and be able to do in order to cope effectively with their real-life situations.
(5) Orientation to learning. In contrast to children's and youth's subject-centred orientation to learning (at least in school), adults are life-centred (or task-centred or problem-centred) in their orientation to learning.
(6) Motivation. While adults are responsive to some external motivators (better jobs, promotions, higher salaries, and the like), the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, and the like).

The work of Knowles has been extended in recent studies relating to self-directed and lifelong learning. McCombs (1991) has identified the general principles which underpin such learning:

(1) Learning is an active process by which individuals try to make sense out of information and experience. A person's prior knowledge, including beliefs and feelings, influence this process.
(2) Learning is facilitated by social situations in which there is free and meaningful interchange of ideas.

(3) Each person's beliefs and thoughts guide the way they see and interpret life. One's beliefs, goals, expectations, feelings, and motivations influence the quality of thinking and information processing.
(4) We continually monitor and evaluate our own thinking and restructure our prior knowledge.
(5) In the absence of insecurity (e.g., feeling afraid, being self-conscious, feeling incompetent) individuals are natural learners and enjoy learning.
(6) Self-esteem and motivation are heightened when individuals are in situations where they are accepted and valued.
(7) Human behaviour is basically motivated by needs for self-development and self-determination.

The implication of these findings for professional development is that teacher learning cannot be forced. Teachers cannot be developed (passively), but can develop (actively). Teachers gain new ideas and increase their knowledge and skill as an integral part of their working lives.

(c) Professional Development Structures and Processes

In the devolving education systems throughout Australia, decisions about professional development of teachers are
increasingly being made at the school level (Review and Evaluation Directorate, 1991). This trend has potential to overcome at least some of the problems of inservice education in recent years and contribute to greater impact in classrooms. As Fullan (1991) points out:

Nothing has promised so much and been so frustratingly wasteful as the thousands of workshops and conferences that led to no significant change in practice when the teachers returned to their classrooms (p.315).

On the positive side, it is possible to identify characteristics of successful professional development initiatives. In a recent review (Dunlop, 1990) the following features were identified as indicative of effective practices:

- sense of ownership by teachers
- recognition of adult learning principles
- sound leadership in terms of communicating expectations and providing support
- appropriate site where participants can work collaboratively in physical and psychological comfort
- reflection of an appropriate conception of teaching; "one shot" activities are avoided
- access to support materials and equipment
- presence of incentives/compensations for commitment eg. financial reimbursement, promotion, release time etc.
- evaluation; both short-term and long-term impact are evaluated
- variety in presentation strategies
- sound content based on teacher needs and the 'practicality ethic' of teachers
- time is allowed for teachers to make changes - significant impact in classrooms may take two or three years after participation.

However, as Collins (1991) points out, even though we know from research a surprising amount about how to make professional development of teachers successful, our education systems don't necessarily follow such advice. What seems to dominate are "corporate management accountability and plenty of steering from the top" (p.16) rather than notions of restructuring schools to promote teacher collaboration and teacher development in the context of rapid social change in Australia.

(d) The Culture of Collaboration

An important theme arising from the literature on professional
development is the culture of collaboration in schools. Ingvarson (1982) found in his research on the impact of in-service programs that when teachers considered the sources of actual change they had made, contact with other teachers was rated higher than written information, in-service courses, regional consultants or any other sources. Peer interaction was seen as a powerful learning device. Collaborative action provides teachers with the opportunity to share ideas and perspectives and to engage in guided reflection on practice.

In a one year study of urban schools in America, Little (1982) examined the organisational characteristics that were conducive to continued "learning on the job". Successful schools were observed to be ones where,

More recently in this line of research, McLaughlin (1993) has asserted that the nature of the professional community "appears more critical than any other factor to the character of teaching and learning for teachers and their students" (p.99).

Fullan and Hargreaves (1991) have argued that teachers have simply not had sufficient opportunity or encouragement to work with their peers, to learn from each other and to develop their expertise as a community. They suggest that educational reform has failed time and again because interactive professionalism through a process of collaboration has failed to recognise the importance of the total growth of schools and the total growth of teachers, the interaction between these two elements and how they impact on the learning of students.

Educational reform and teacher development are about changing the roles and relationships and how these operate within schools (Butt, Townsend and Raymond, 1990; Barton, 1992). The development of roles and relationships is dependent upon the nature of the interaction amongst all stakeholders, the way that they are able to collaborate with each other and the degree to which they assume a shared responsibility for the growth of a positive learning environment. In Table 2 an overview is provided of the facilitating and inhibiting conditions of teachers' workplace learning.

Table 2
Teachers' Workplace Learning: Facilitating and Inhibiting Conditions

Facilitating Conditions  Inhibiting Conditions
A "personal-communal" ethos in the workplace contrasts with a "rational-bureaucratic" ethos in the workplace.

Dialectic and problematic approaches to reform (direct to reform (mutualism)) are contrasted with logistical approaches to application of theory to practice.

Recognition of connections between personal and professional knowledge and lives of teachers is ignored in the workplace. The school is viewed as an "educative workplace" for teachers as well as students. Principles of adult learning are recognized as important and applied to teachers' learning.

Stages of professional development are not viewed as recognized in teachers' lives as a continuum or a staged process. Teachers' needs are seen as differentiated on a range of factors including age, gender, experience in teaching, ethnicity, etc.

Professional development (inservice) programs are designed to provide for follow-up and continuing support opportunities provided for teachers. One-shot conferences and programs are the only form of development.

Principal and executive provide leadership and a vision for improvement. Lack of leadership and vision for improvement is evident.

A culture of collaboration and a sense of professional community in the school is contrasted with individualism in the school.
Developmental and reciprocal approaches Punitive, hierarchical approaches to
teacher appraisal

Contextual Model of Teachers' Workplace Learning

In the light of the literature review and research findings a model has been constructed which seeks to identify the factors which impinge on teachers' workplace learning. The research involved questionnaire responses from 860 teachers in 74 schools and follow-up case studies with 10 of the teachers. The model is shown diagrammatically in Figure 1 and is explained in the following paragraphs.

Figure 1
Contextual Model of Teachers' Workplace Learning

The Context

The context in which schools and teachers are situated has greater significance than any other single factor in determining what and how teachers learn on-the-job. It should be viewed in both a broad sense and more narrowly. In the broad sense it refers to the changing cultural mix of Australian society and the changing family structures, economic circumstances and technological development of the society. The ideological responses to these and other relevant issues are reflected in Commonwealth and state government policies and initiatives on education which impact on schools in various ways. Such policies and initiatives very often have funding implications which either enable or constrain school activities and thereby affect the professional development of teachers.

Viewed more narrowly, the context refers to the community served by the school. The "local" community is a formation of intersecting elements including location, social class, ethnicity/aboriginality, family structures and religion. Since the student population and very often the teachers as well, are drawn from this community it is a major source of the values expressed in the school. Teachers, however, also come from outside the local community and sometimes contest the values they
find in the school and seek to change them. This may particularly be the case with a new principal who has the added authority of the position as well as the professional expertise to effect change.

As well as the everyday informal contacts between teachers and parents, schools and their communities very often establish formal mechanisms to mediate the influence of the context on the school. Such mechanisms as the School Council or School Board, P&C Association and parental participation on important committees eg. School Development Committee, are commonplace in schools. Both parents and teachers are typically represented on these structures and they often make decisions about school goals, funding allocations and curriculum priorities which have a significant bearing on teachers' workplace learning.

The case study research indicates that the context is an important determinant of what teachers learn in the workplace. Examples include a Commonwealth Government funded "Girls' at Risk Program" which was stimulus for teacher learning, a Department of Education policy on Student Behaviour Management which was developed into a school policy and became the focus for a teacher to change her classroom practice in line with parental expectations, and the extent to which Catholicism provides the framework of values and beliefs which guide teacher actions in Catholic schools. At a local level the needs of certain NESB communities for ESL teaching can be clearly seen to drive teacher development in that direction.

The Nature of the Innovation/Change

For present purposes an innovation is defined as a "product" and change as a "process". Some innovations eg. laptop computers are clearly products and some changes eg. co-operative learning are clearly processes, though that distinction is not always perfectly clear as in a new syllabus which is both a product and a process. The nature of the product and/or process is an important factor in what and how teachers learn as is the question of who initiates the learning i.e. teachers themselves or others. This question often raises the issue of ownership of the learning in relation to imposed or self-generated change.

The case study teachers often made the point that for learning to be really effective it must come from within. That is to say teachers must want to learn before they will actually change their practices. However, it is not the case that only self-generated changes result in teacher learning - for instance in the case of the "laptop trial" the innovation was clearly
introduced by the principal though the teacher volunteered to undertake it and in that sense it was not imposed.

The teachers often referred to the practical aspects of the innovation/change in relation to classroom usage. They tended to criticize professional development programs which ignored the classroom application of the knowledge being presented. This practicality ethic is an important feature of workplace learning since the essence of it is the transformation of knowledge, values and beliefs into classroom practice. Very often the ideas were presented by outsiders but they were not owned by the teacher until they had been tried and tested in the classroom. The issue of adoption of innovation/change by teachers or alternatively resistance by teachers is an interesting one. The research sheds some light on this though it should be pointed out that the teachers were selected for the case studies partly on the basis of their positive attitude to professional development and change. The teachers studied had all undertaken significant workplace learning; even the beginning teachers in their first year of teaching. It is evident that the teachers all had a rationale grounded in improving some aspect of their classroom practice - the stronger the rationale from the teacher's perspective the more committed they were to learning. There were also clear connections between the teacher's purposes and values and the nature of the innovation/change with which they were currently involved. Often their current situation was the result of many years of commitment to particular purposes and values though there were also cases of distinctive and rapid change. A contributing factor appears to be the credibility of those proposing the innovation/change and the case studies reveal that they included academics, advisors and consultants, principals and other executives, as well as fellow teachers.

The Teacher as a Person and Learner

The question of how teachers learn is a complex one partly relating to the teacher as a person and learner. When teachers are studied as individual persons and adult learners, a great many differences emerge. Perhaps the most prominent in terms of workplace learning is the career stage or stage of development of the teacher which is, of course, usually related to age. It is clear that beginning teachers, who are usually but not always the youngest on staff, have different needs and concerns from more experienced teachers. The research reveals that the needs of beginning teachers are more situation-specific and less context-driven than experienced teachers.

The specific demands of the classroom provide the focus for beginners whereas older, more experienced teachers are able to make connections between the classroom and the wider context
which seems to provide them with a clearer sense of purpose and stronger justification for their teaching.

Issues of gender, ethnicity and social class of teachers are also implicated in complex ways in teacher learning though only gender was in any way investigated in this project. These issues clearly have a great deal to do with personal life experiences, interests and concerns which impact on the teacher's career in a multitude of ways.

For all sorts of reasons teachers will vary in their commitment to learning and change. Some reasons may be related to specific innovations/changes with which they agree or disagree and others to levels of personal commitment and motivation to change their practice. Some of this may be due to personality factors and some to their already developed expertise or prior learning in relation to a particular learning situation. Many of the experienced teachers in the research referred to their history of learning in regard to specific innovations and changes though it is also the case that older teachers can undergo quite sharp and dramatic reorientations in their career as a result of workplace learning.

The Situations of Teaching

This factor relates primarily to the question of where teacher's workplace learning occurs. Teachers work in different situations which impact on their professional development in distinctive ways. For instance it is claimed by teachers who have worked in both primary and secondary settings that there are clear differences in the nature of the work and consequent demands on teachers. One of the case study teachers, who has taught in both, reinforced this point by saying that primary teachers are more child-centred than secondary who tend to be more subject-centred. School size may also be relevant at this point since most secondary schools are quite large whereas primary schools can range in size from one teacher through to very large schools. Teachers commented that in smaller schools they get to know everyone on staff a lot better though in larger schools it was evident that teachers work in manageable groups which form around particular professional interests and which can provide the basis for workplace learning.

The issue of grade/class allocation and teaching load is a particularly important one for teachers, particularly beginning teachers. Despite general acceptance in primary schools that Grade 6 is the most difficult, the research reveals that beginning teachers are placed on that grade and furthermore they
have a lot of difficulty with it. The suggestions have often been made that beginning teachers, at least in their first year, should not be placed in difficult situations and that they should have a reduced teaching load. It is evident that these suggestions have not always been taken up.

Other aspects of the teaching situation that effect teaching and learning are the student/teacher ratio (class size) and the students' attitudes to schooling. These two points are connected in the sense that a large class of very keen learners is quite a different work situation for a teacher than a large class of resistant learners. One way to enhance teaching and learning with the latter type of student is by reducing class size.

Learning Resources and Support

The range of issues at stake here are concerned with the resources and support structures which facilitate or impede teachers' workplace learning. This factor also addresses the question of how and from whom teachers learn. Of crucial importance is the role of the principal in facilitating change and establishing structures within the school which enhance teacher development. In the research some principals were found to be strong agents of change and advocates for teacher learning while others were criticized by teachers for lack of support and recognition of what they were trying to achieve.

Other executives (variously deputies, assistant principals, leading teachers etc.) also have an important role in assisting and supporting teachers in their endeavours to improve their teaching though most teachers feel that the support of their colleagues i.e. fellow teachers, is the most important. In some schools the responsibility for encouraging and organizing all in-school professional development is allocated to a member of the executive team other than the principal, whereas in others it is divided amongst a number of executives who act as co-ordinators or key teachers in relation to a particular area of school life.

The question of resources for teacher workplace learning is an important and vexed one. Some systems provide a direct allocation of funds to schools, others provide an allocation of release days rather than funds while others provide heavily subsidised courses to which teachers are expected to contribute from their own pockets. There are many and varied ways in which training and development (T&D) opportunities are provided in schools though a common criticism from teachers is that there is insufficient time available to do all that is expected or that they desire. The issue of time is of course related to the
business of the daily life of a teacher but it is also related to the extent to which teachers are prepared to give their "own time" (eg. after school hours, holidays) to their professional development. One of the many strategies which most schools make use of is the school development/closure day. This was often mentioned as a particularly useful exercise and when coupled with the idea of using outsiders such as academics and consultants to bring fresh ideas to the school it can be a powerful stimulation for teacher learning in the workplace. Provided that funds are available to pay for the outsider, the "pupil-free day" it is a solution to many of the problems of workplace learning.

Whilst the literature on appraisal of teachers suggests that it has significant potential for teacher development/improvement, the research did not uncover any specific evidence of this. This could well be due to the fact that in most systems the appraisal processes are in the early stages of development and perhaps the potential has yet to be realized.

On the other hand, there was considerable evidence of induction programs having some effect, particularly for beginning teachers. Though there are few beginning teachers being employed there is clearly a recognition of the need for induction during their first year. One system brought all the beginning teachers in a region together for a course and another had a "tutor-teacher" or mentor scheme in place at the school level. Whilst they are not without criticism these schemes are an important source of resources and support for new entrants to the teaching profession (Wildman, et al., 1992).

System Recognition and Reward

The notion that there might be system recognition and reward for teachers' workplace learning is relatively new and quite novel to most teachers. Teachers generally feel "the system" is uncaring and unconcerned with their growth and development and it is strongly criticised when resources, recognition or rewards are withdrawn. Given the nature of most systems as bureaucratic organisations it is unlikely that they will ever be popular and a source of satisfaction for teachers. However, they can very easily be sources of dissatisfaction.

Since teachers view workplace learning as an essential element in their professional development and the major means by which they improve their teaching, it would make good sense for systems to give greater recognition and reward for it. This would enhance the incentives for teacher learning. There are of course some mechanisms in place which do this and there seems to be a growing acceptance of the need for it. For instance the recent creation of Advanced Skills Teachers (ASTs) is a means by which workplace
learning is being recognized and rewarded. In most of the schools visited for the research, ASTs had been or were in the process of being appointed and there is good reason to believe that the scheme is valued by teachers. Other promotion criteria also give high priority to workplace learning and indeed it is notable that little credence is given to formal academic qualifications in many promotion situations.

There are also other means by which workplace learning is recognized and rewarded. For instance one state system has introduced a policy whereby 3YT teachers can get access to 4YT salary scales by alternative pathways to the traditional year of academic training. The alternatives are based on a range of workplace competencies and/or completion of 250 hours of professional development activities including courses, school development days etc.

A further example of the recognition of workplace learning can be found in the accreditation by universities of school-based professional development courses. Such accreditation enables teachers to apply for credit transfer of learning that occurs in relation to their work setting. Usually the university concerned will have an involvement in some or all aspects of course design, delivery and assessment and policies on the amount and level of credit transfer varies from one university to another.

One of the difficulties to be overcome in recognising and rewarding workplace learning, particularly of the informal type, is documentation and evaluation. Whereas formal learning has a well-established process of documentation i.e. the academic transcript, workplace learning does not. In various industries there are moves to recognize "prior learning" so a range of processes should be investigated with special consideration given to the concept of portfolios as a way of documenting and evaluating workplace learning (eg. Wolf, 1991).

The Culture of the School

The connections between the culture of the school and the nature of workplace learning appear to be fundamentally important. In this usage "culture" refers to "the way things are done in this place". Some of the features of school culture which seem to have high salience for workplace learning relate to beliefs and values while others relate to organizational structures and functions.

Of most importance is a strong belief by teachers, across states and systems, in the efficacy of workplace learning. It is clear
from the research that teachers believe that their most effective and useful learning occurs through on-the-job experience and reflection. They do not deny the need for outsiders to provide new knowledge and ideas but they are insistent that such new information is useful to them only when it has been tried in the classroom. It has to undergo the test of practical relevance before it can be considered useful. Furthermore, many teachers believe that they learn most effectively from the students in their classrooms i.e. their judgements about what "works" are formed largely through interaction with students.

Another important source of learning for teachers is their colleagues i.e. fellow teachers. Teachers learn from each other in both planned activities eg. T&D sessions and informal ways eg. discussions in the staff room. In collaborative school cultures where teachers are keen to share ideas with colleagues there is likely to be more workplace learning occurring than in individualistic cultures. Whilst the research does not suggest that this is an immutable law (there are cases of significant workplace learning which are essentially individualistic) it is safe to claim that teachers generally feel that having someone or a group "to bounce ideas off" is an important source of learning. A collaborative culture is more likely to encourage risk-taking with new approaches and strategies since the risk of failure is shared and therefore less threatening for each individual. An ethos of caring about colleagues was particularly evident in some of the research schools and teachers believed that this was important for their workplace learning.

Another significant feature of school culture is the sense that teachers have of ownership and control of professional development activity - owned and controlled by teachers themselves or by the system. Some systems have recognized this issue in their use of the terminology "Training and Development" (T&D) to indicate that some teacher learning is system-driven i.e. training, and some is teacher-driven i.e. development, though that distinction is not always perfectly clear. In the research, teachers often criticized the system training for lack of relevance to their classroom situation and they felt that if they had more say in what courses were offered or who should conduct them, then they could overcome the problems. This is not necessarily so, however, and it may be more productive for teachers to realize that there are inevitable tensions between system and individual needs which can best be resolved through an appropriate balance between the two.

A school's capacity for ongoing change is a further important feature of the culture which has implications for teacher
learning. This is a matter of structure as well as individual propensity for change. School systems around the nation have, over recent years, been undergoing restructuring in an attempt to, inter alia, create more responsive and adaptable schools for a changing society. These moves are generally designed to enable schools to be less bureaucratic and more flexible in their structures. One manifestation of this is in shared responsibility for decision-making in schools. In the research schools it was found that teachers, executives and parents generally share this responsibility and this contributes to the collaborative culture which is conducive to teachers' workplace learning.

Conclusion

The research project identified seven factors which impinge directly and indirectly on teachers' workplace learning. Of those factors it appears that 'the context' is the most important in determining what teachers learn in their workplaces whilst 'the culture of the school' is particularly important in shaping how teachers learn. The study raises a number of issues in relation to recognition and accreditation of workplace learning to which school systems and universities should pay closer attention.

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