

**Teaching the Teachers:
An examination of an inservice program and
its effects in the classroom**

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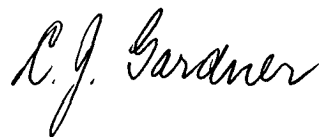
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Caroline Jane Gardner

Abstract

An expectation of professional teachers is that inservice education is undertaken, on an on-going basis. This is particularly important at a time when society is undergoing major technological, social, economic or cultural changes, which requires teachers to play new and expanded roles. Policy direction in Australia, the United Kingdom and the United States of America has led to school-based management, which, in a large part, means that inservice programs are budgeted for, and managed by, individual schools. It would seem important to ensure that the resources directed to professional development from school budgets are used for inservice models and implementation processes which achieve intended outcomes in terms of improved quality of teaching and learning,

The purpose of this study was to conduct an indepth investigation of a commercially provided inservice program that enjoyed a positive reputation among teachers and which was in high demand by schools. No record could be found of a critical analysis of commercial inservice programs prior to this study. It was considered valuable to scrutinise closely a particular program in order to identify the qualities which made it popular, and how teachers utilised skills and knowledge presented in the workshop sessions. An inservice program, *Teaching for Effective Learning*, developed and presented by a private Australian education consultant, Dr. Julia Atkin was the focus of this study.

Using document analysis and observations the study first examined the relationship between the theory and practice of the inservice program, and between the conceptual structure of the program and the literature on teaching and learning. Secondly, the study examined the impact of the inservice program in terms of implementation in schools. A naturalistic inquiry was deemed appropriate for the study of implementation, using interviews, a questionnaire, observations of teachers in their classrooms, teacher journals and student work, as data gathering methods.

Three groups of teachers, initially comprising a group of forty-six, who represented all those who had attended the *Teaching for Effective Learning* workshops in Tasmania between 1991 and 1993 were used in the study. Data were analysed in terms of a final group of thirty-one.

Results indicated that the *Teaching for Effective Learning* workshops were held in high regard, as was Atkin as a presenter. However it was found that the theoretical underpinning of the workshops, Atkin's Framework for Effective Teaching, while in print and in presentation, encompasses most dimensions found in the literature on teaching and learning, did not provide adequate

structures for teachers to be able to fully implement it in the classroom. Problems of transfer of skills and knowledge learned in the workshops was compounded by a lack of administrative or collegial support for those attempting implementation. There was a high level of transfer of at least three strategies taught in the workshop, though there were approximately eighteen concepts and strategies taught. This raised issues of why some were implemented rather than others; whether those used had more practical application, were seen as more valuable in improving student learning, or the conceptual underpinnings of the strategies were clearer. The data also indicated that, in her presentation, Atkin paid attention to those aspects shown in the literature to be important for adult learners, and she brought together a range of teaching and learning theories, while presenting them in language, and with processes, which were meaningful to teachers. Atkin also made explicit the craft knowledge of teachers and used that knowledge as a basis for most of what was taught in the workshops. One important outcome related to Atkin providing teachers with a 'language' that they could use to describe classroom processes and practices. The data also indicated that there was a congruence between Atkin's theory and the way in which she presented her workshops.

This research has implications for educational policy, at school and system level, regarding cost effectiveness of inservice education for teachers and tertiary training programs. Without attention to those factors which lead to improved teaching and learning, through effective transfer of skills and knowledge, schools will continue to expend large sums of money on inservice with little improvement in student learning.

Acknowledgements

This study was possible only because Dr Julia Atkin was willing to have her work scrutinised. Her openness to examination, which involved making all necessary documentation available, and having her workshops video-taped, is a measure of her generosity of spirit and professionalism. Dr. Atkin was chosen to be the focus of this study because teachers throughout Australia held her workshops in such high regard. Through this study I have also come to understand why she is so well respected. My sincere thanks to her.

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Professional development is an important part of a teacher's professional life. The complexity of teaching demands that teachers keep up to date with developments that impact on the classroom. The act of teaching is not static, either in the classroom or in terms of what the profession deems to be best practice. From time to time teachers need inservice education in order to update their teaching practice and incorporate new strategies into their classroom repertoire. According to *Teacher Learning* (Department of Employment, Education and Training, 1988:4) 'more than at any other time in our history, we need to give the highest priority in education to the inservice training and development of our teachers'.

Responsibility for the provision of professional development, like many other aspects of schooling, changed throughout the 1980s when Australian educational systems became part of major structural, industrial and political changes occurring at State and national levels. These reforms reflected a trend in many countries. Levacic (1995:1) pointed out that, 'despite differences in political and social context, there are striking parallels in contemporary educational reforms adopted by English-speaking countries, in particular Australia, New Zealand, the UK and the USA'. Beare (1995) identified the trend throughout the Western world as 'consistent, towards deregulation of schools, freeing them to act as self-contained entities loosely linked in a network of schools' (p. 143). That schools in control of their own decision-making, 'must provide a better quality education than a school run by a centralized

bureaucracy', is 'a truth universally acknowledged' (Levacic, 1995:1) by the number of governments and their agencies who have endorsed the idea.

In the USA, unlike the UK, there is no centrally legislated policy of school reform, so a diverse range of school management policies exist throughout the country, not only between states, but between school districts within states. Despite the various school systems of management, self-managing schools is a 'key part' of the overall ideology of school restructuring, with 'shared decision-making' being an important component of the structure in some school districts, (Davies & Hentschke, 1992:118). Shared decision-making means that local leadership councils are given authority over school matters, including teacher professional development.

In the UK, the 1988 Education Reform Act (ERA) allowed schools to disengage from local education authorities (LEAs) and receive funds directly from the national government (Beare, 1995). In this situation, many schools became more powerful in decision making than their LEAs and took control of the professional development of teachers. Some LEAs still act in a managerial role, overseeing both the operations of the schools or 'operational units' and 'functional units' such as finances, personnel, property services, educational advice and inservice training, which supply services to the schools (Levacic, 1995). This supply is on a commercial basis with schools paying for those services. However, MacGilchrist (1994) points out that

as a result of the devolution of the control of INSET [inservice education and training] and other budgets to schools...the infrastructure of support for professional development in LEAs is fast diminishing. Money for LEA teachers' centres and advisory teachers is unavailable unless schools are prepared to enter into some service level agreements (p. 23).

The result has been that individual teachers 'find it increasingly difficult to be in control of their own professional development and are much less likely to have access to funds' (MacGilchrist, 1994:23). The changes which have taken place in

the UK, have, MacGilchrist asserts, made the future of professional development uncertain.

Professional development or teacher development in New Zealand has like other countries, 'moved from central sources to the school' (Ramsay, 1994:28). Since 1989 each school has been required to develop a Charter, within which Goals, developed by the Ministry of Education must be placed. These Goals, along with a principals' Code of Conduct ensures a 'commitment to the continuing personal and professional growth of staff' (p. 29). Individual schools now pay more attention to teacher appraisal and how this appraisal relates to staff development programs.

In Australia, according to McCulla (1994:9),

the continuing professional development of teachers...is at a crossroads, shaped at a macro-level by the imperatives of economic reform and the reconceptualisation of the role of training and development in organisations generally, and at a micro-level by a clearer understanding of how school and teacher development takes place.

These reforms have fashioned 'a new culture of professional development that is markedly different in its design, delivery and evaluation to anything that has preceded it' (McCulla, 1994:9). One of the trends which has shaped a new culture in Australian professional development runs parallel to the USA, UK and New Zealand. This trend made each school a 'free-standing entity', required to have a local policy-making council, and gave considerable autonomy over an allocated budget, while de-zoning schools, to put enrolment on a competitive basis (Beare, 1995). As self-management has occurred, state education systems have reduced their professional consultant services, so that schools are in a position to choose from any available satisfactory source of services that they may require. Education Support Services have increasingly provided services but have been 'forced to operate like free-standing firms, not as units controlled within a hierarchical framework, surviving on the quality of the service they gave' (Beare, 1995:142). McCulla (1994) points out that while schools have

responsibilities to make some important decisions, it is 'within a framework of centrally-determined goals, policies, priorities and standards which define the vision and core values of the system of education' (p. 12).

At a time when schools are able to 'shop around' for professional development services, research into effective schools, school improvement and school development and 'new understandings of workplace learning and, in particular, of how teachers learn' (McCulla, 1994:10) is providing information to better inform users of inservice programs.

However, a series of Australian reviews and investigations between 1985-90 into initial teacher education and ongoing professional development of teachers (for example, Karmel, 1985; Coulter & Ingvarson, 1985; Schools Commission, 1988; Schools Council, 1990) found that generally, 'the connection between professional development programs and the priorities of schools and teacher were often weak'. The reports 'advocated school-focused professional development which took into account the contexts in which teachers were working' (McCulla, 1994:10).

Further problems identified in these reports included 'lack of coordination of aims, priorities, programs and structures', 'lack of integration between training and development and general school planning'; 'criticism of one-off withdrawal approaches at the expense of sequenced learning programs combining off-the-job and on-the-job training' and 'lack of forward planning for professional development' (McCulla, 1994:11).

According to McCulla (1994), a key factor in school improvement is the school context. He suggests that what is needed is

a school-focused approach dependent on the clear articulation by a school community of real priorities important to it, linked to desired student outcomes and the external reform agenda, and the provision of school-based professional development for a whole school or for

significant members of the staff identified specifically with the change (p. 15).

McCulla (1994) suggests that in the future there will be

- a strengthening of school-focused and school-based professional development which will require a re-thinking of how teachers learn, of the kinds of activities that are likely to result in learning, and of the enabling conditions within and supporting the school that promote learning
- reporting of training and development in terms of outcomes for teaching practice and student learning mapped against intentions within the school plan
- more prominent leadership roles for principals and school executive in managing cultural change within schools, with specific training in professional development and change management to enable them to do so
- high quality consultancy teams and other resource people providing on-site support to schools to address school-identified needs
- greater use of collaborative work practices in schools including mentoring, job rotation, peer coaching and collaborative planning of professional development activities with increased emphasis on adult learning principles which encourage reflection, action research, collegial sharing and networking (p. 17).

Professional development in Australia has played a central role in the reform of schools since the Karmel Report of 1973. In response to the Karmel Report, the Commonwealth government, through the Schools Commission, provided funds for inservice education for both government and non-government schools. Since 1973, professional development in Australia has changed in terms of 'its management, delivery, and participation' (Logan, 1994:5). Under the current National Professional Development Program (NPDP), the Commonwealth Department of Employment, Education and Training (DEET) is providing \$60 million over a three-year period from 1994–1996 to 'enhance professional development activities for teaching staff in Australian schools' (National Professional Development Program Guidelines for Funding, 1995:1). These

funds are aimed at professional development which is 'additional to that being undertaken by school authorities and teachers' (p. 1). Under the NPDP scheme, outside providers may apply, along with education department personnel, for funds to deliver professional development programs which address specified priority areas. The Commonwealth uses a competitive selection process in decisions regarding funding.

While Australian school systems undergo major changes, the issue of teacher development, as an integral part of these changes, cannot be ignored. In addition to the devolution of management, the types of changes identified in Australian schools include technological, social, economic, cultural, curriculum content and organisation, pedagogy, student assessment, system and school organisation, and policy-making processes (Collins, 1988; DEET Report, 1988; France, 1990).

According to Collins (1988), schools are expected to play new and expanded roles as a result of technological and social changes and teachers are expected to place emphasis on the development of skills, such as cooperation in learning, initiative and flexibility in students. France (1990:114–115) makes a similar claim when he points out that community expectations require teachers to develop in students a wide range of skills, knowledge and attitudes, including 'rational thinking ability, imagination, love of learning, judgement, creative self-expression, self-esteem, concern for others, skills for adult life and work, understanding of themselves and their work, as well as the foundation skills of employability'.

Issues of equity and social justice mean that schools must change, in order that 'traditional educational practices in relation to girls, to Aboriginal children, to rural children, to children from minority cultures and social groups, and to disabled children' can be addressed (Collins, 1988:221). Further, changes in decision-making structures from a central departmental position, to school-based decision-making, generate a need for schools to 'develop defensible, professional views on what schools are for and can realistically do' (p. 221). Therefore,

Collins (1988) argues, while such changes are occurring in schools and systems, teacher development must be addressed as a matter of priority.

The development of teacher skills, such as those to which Collins refers, may not be addressed adequately in the preparation that teachers receive in their preservice teacher training. According to France (1990) preservice training cannot fully equip teachers for the career-long, changing needs of the profession. Technological changes have had an impact on teaching practices and on student and social values, to the point where 'changing educational priorities make it increasingly necessary to reconceptualise the teaching role itself' (France, 1990:114–115).

Further changes which generate a need for inservice education occur in response to external influences on schools. The delivery of curriculum in schools is dependent on, or is influenced by, government policy. In the period from the mid-1980s, the Commonwealth of Australia, in conjunction with the States, has developed a national policy for education which has resulted in the production of a National Curriculum Statement and a National Profile of Achievement for each of eight key learning areas. The implementation of this policy has had a significant impact on teachers as they attempt to incorporate this at the school level. Usually, in cases of government policy initiatives affecting schools, there is an accompanying inservice program policy in order that teachers can enact the innovation.

Concomitant with system-guided curriculum policy, the alternate policy direction towards school-based management, means, as previously stated, that inservice programs are budgeted for, and managed by, the school. Coulter & Ingvarson (1985) point out that the professional development of teachers appropriates a large slice of educational funding. It would therefore seem to be important to ensure that the resources directed to inservice education from school budgets were deployed towards effective inservice models and, importantly, towards ensuring that skills and knowledge learned in those inservice programs are transferred to the classroom. It is current practice for

schools to contract particular programs and/or presenters for their teacher development days, so there are resource implications for schools regarding decisions made in determining the type of inservice that teachers undertake. Many schools have taken the option of selecting to pay for outside consultants or a private provider, known to teachers and principals. Outside consultants are described by Goodlad (1994:102) as those 'tied to or conversant in innovative ideas and practices', and as 'those on the consulting circuit...not necessarily the creators of the ideas, but...articulate advocates'. Teacher professional development may centre on system level determined initiatives such as the National Curriculum Statement and a National Profile of Achievement, or upon commercial programs, such as *Teaching for Effective Learning* (Atkin) or *Extending the Teacher Repertoire* (Bennett).

Professional development and inservice

The literature pertaining to the development of professional knowledge and competence of teachers variously refers to the process as *professional development*, *staff development*, *teacher development* or *inservice education*.

Fullan (1990:3) holds that the term *staff development* is conceived broadly to include 'any activity or process intended to improve skills, attitudes, understandings, or performance in present or future roles', and he uses the terms *staff development*, *professional development*, and *inservice* interchangeably. Sparks & Loucks-Horsley (1990:234-235) use the term *staff development* in a professional context when they define it as 'those processes that improve the job-related knowledge, skills or attitudes of school employees'. Costello (1991:131) emphasises that *professional development* is a 'career-long issue' and defines it as 'the process of growth in competence and maturity through which teachers add range, depth and quality to the performance of their professional tasks'.

In this study the terms *professional development*, *staff development*, and *teacher professional development* are used interchangeably in referring to the broad

concept of the development of professional knowledge and application, in the sense that Costello (1991) defined it.

The term *inservice* is used (Coulter & Ingvarson, 1985; Bolam, 1986; Ryan, 1987; Department of Employment, Education and Training, 1988) to refer to specific programs which contribute to the continued professional development of teachers after initial or preservice training, including award courses and non-award courses. Bolam (1986:18) views *inservice* as

those education and training activities engaged in by primary and secondary teachers and principals, following their initial professional certification, and intended mainly or exclusively to improve their professional knowledge, skills and attitudes in order that they can educate children more effectively.

Similarly, in the Australian Department of Employment, Education and Training (DEET) *Teacher Learning* (1988:5), *inservice* is viewed as

deliberate adult learning activity initiated by teachers themselves, by their employers, by tertiary institutions, or by other agencies with a stake in education. It has as its purpose the improvement of the educational enterprise, particularly the quality of teaching, and, in the final analysis, better outcomes for students.

In this study the term *inservice* is used in the sense that Bolam and DEET define it when they describe the programs which aim to further professional/staff/teacher development. These programs may take many forms, be award or non-award, internal or external to the school, and be of varying lengths. They may range from single lectures to full courses, involve an individual teacher or the whole school. Whatever form it takes the underlying assumption is that teacher professional knowledge and competence will improve (Coulter & Ingvarson, 1985:25).

According to Lieberman (1992) professional development for teachers is a relatively new phenomenon, with a number of studies in the 1970s pointing to the means whereby teachers developed new practices in their classrooms. These

studies, she asserted, indicated that the majority advanced their skills and knowledge in teaching institutions, largely in mass lectures. Some teachers used an alternative to this approach, that is, action research, in which research programs were undertaken in their own classrooms, often in partnership with academics. The process employed by the majority assumes that teachers could learn to use innovations from lectures; action research assumes that teachers could learn from researching their own classroom issues. These two approaches stem, according to Lieberman (1995), from different assumptions about how teachers learn and improve their practice, 'either through direct instruction by outsiders or through their own involvement in defining and shaping the problems of practice' (p. 592).

In 1992 Lieberman claimed that teachers' learning is little understood. Three years later she noted that

the ways teachers learn may be more like the ways students learn than we have previously recognized. Learning theorists and organizational theorists are teaching us that people learn best through active involvement and through thinking about and becoming articulate about what they have learned (1995:592).

Studies in the 1970s and early 1980s extended our understanding of effective staff development, and produced a body of knowledge about the types of professional development and what makes them successful (Sparks & Loucks-Horsley, 1990). Added to which is Lieberman's (1995) contention that we now know more about how teachers learn. However Fullan (1990:3) suggested that, despite our considerable knowledge about what makes successful staff development, 'it is not well practised'. First, 'it takes a great deal of wisdom, skill, and persistence to design and carry out successful staff development activities', and secondly, the process is as much political as educational. Fullan maintained that an approach which views staff development as institutional development is more likely to lead to school improvement than approaches which see the staff development as a strategy for implementation, or as an innovation. Staff developers, he claimed, must work with school organisations as much as with the individual. 'Staff

development will never have its intended impact as long as it is grafted onto schools in the form of discrete, unconnected projects' (p. 21).

According to Conners (1991), very little published research in Australia has investigated teachers' perspectives of professional development programs. Nor could a data-base search of AUSTROM or ERIC find any evidence of research into the effectiveness of any commercially-offered inservice programs. There is considerable theoretical and practical merit, therefore, in undertaking research concerning specific programs, which are deemed by teacher participants to be highly successful, in order to identify specific characteristics of success, relevant to a particular workshop or program.

Purpose of the study

Devolution of management to schools means that principals, in conjunction with colleagues, can make decisions regarding provision of inservice programs for the professional development of their teachers. As noted earlier, many States in Australia have reduced their professional and consultative services, leaving schools to choose from the available market of inservice providers. Such providers may come from government agencies such as Education Support Centres, or private education consultants. With devolution of management, there is a growing trend in Australia for schools to 'buy in' private consultants for their professional development programs, the value of which may only be known through teacher and principal professional associations, social networks or the first-hand experience of individuals. Since there is no reference in the literature to evaluation studies of commercially presented inservice programs, the purpose of this study was to examine, in depth, one such program, *Teaching for Effective Learning* and its impact of teacher practice in classrooms. This particular inservice program was developed and presented by a commercial educational consultant, Dr Julia Atkin.

Anecdotal evidence from three States of Australia indicated that Atkin's *Teaching for Effective Learning* workshops have attained a reputation for excellence among

teachers, and two principals in NSW schools (Barraclough, 1994; McIntyre, 1994) maintained that the implementation of skills and knowledge learned in Atkin's workshops has led to a significant improvement in their schools. When an inservice program receives high acclaim, for such things as the relevant and practical nature of its content, pitched at an appropriate level for the participants, or for the quality of its presentation, it is important to ascertain the nature of the qualities which appeal to teachers, and whether or not those attributes lead to high levels of implementation.

The study therefore had several aims. The first was to analyse in a critical fashion one particular inservice program. It was directed at identifying the nature of a commercial program, *Teaching for Effective Learning* and its conceptual structure, Atkin's Framework for Effective Teaching, which was disseminated in these workshops. This indepth analysis was undertaken in order that aspects of the Framework could be identified when observed in classrooms. A review of the literature was also undertaken to ascertain the veracity of the Framework, and the extent to which it was an innovation. Second, Atkin's own style of presentation was examined, to ascertain whether or not there was congruence between her theory and practice, that is, between her Framework for Effective Teaching and her own presentation style in the workshops, and the part that this may have played in the workshop's popularity. Third, the study aimed to determine teachers' perceptions of the impact of Atkin's Framework and, where possible, to observe its use in the classroom to ascertain not only its implementation, but the factors which influenced implementation. With these aims in mind, three research questions guided the study. These were:

Research Question 1:

What is the relationship between the conceptual structure of the *Teaching for Effective Learning* inservice program, the research literature on teaching and learning, workshop content and the methods of presentation?

In answering this research question, four key factors were taken into consideration, namely:

- The conceptual structure of the inservice program *Teaching for Effective Learning*.
- The extent to which the conceptual structure reflects the existing literature on teaching and learning.
- The congruence between theory and practice of the inservice program.
- Atkin's personal presentation style.

Research Question 2:

What aspects of the *Teaching for Effective Learning* inservice program do teachers value and translate into classroom practice?

In answering Research Question 2, three key factors were taken into consideration, namely:

- The skills and knowledge taught by Atkin in the workshops .
- The transfer of skills and knowledge learned in the workshops, as displayed in teaching behaviour and as described from teachers' own experience.

Research Question 3

Which factors help or hinder the transfer of skills and knowledge learned in the inservice program?

Significance of the study

Decisions regarding expenditure of resources on inservice programs for teachers in the context of school-based management may be critical to a school budget. Decisions regarding providers of inservice programs are at the discretion of principals or staff development officers in schools, and it is a trend in Australia that, since the devolution of management to schools, commercial providers of inservice programs are increasingly employed. Questions therefore can be asked about who examines these commercially offered programs. How are they judged to be suitable, given a school's limited budget and an array of competing claims on that budget?

A data-base search of the literature relating to inservice programs offered by commercial enterprise, revealed no references to it. Under the descriptors of 'private providers' there were 17 references in AUSTROM, but none bore any relationship to inservice private providers. ERIC had no references to 'private providers'. Using cross descriptors of 'inservice education' and inservice teacher education' with 'private providers' no references were found in AUSTROM or ERIC. Other descriptors in these two data bases from which no information emerged were: 'commercial consultants' and 'commercial providers' with 'inservice'; 'program evaluation' with 'private providers' and 'inservice'. The ERIC data base uses the descriptor 'commercial' in relation to 'business' only.

Apart from the value of an inservice program there are questions of success, acceptability and appeal to teachers. There is a need to examine and understand more fully why some programs are highly regarded by teachers and other programs less so. Of equal significance is whether or not the popularity of programs translates into high levels of implementation. Increased understanding of success factors regarding inservice programs may be significant for budgetary decision-making of schools, for professional development policy makers and undergraduate teacher education courses. Additionally, information regarding successful inservice programs would assist those organisations competing for National Professional Development Program (NPDP) funding.

Since the early 1980s increased awareness of the complexity of change in schools has resulted in a shift of focus from the development of new curricula, to the means whereby innovations may be implemented. Introducing change in classroom practice and improvement for student learning inevitably requires a change of behaviour on the part of teachers. To facilitate the introduction of any innovation, appropriate on-going professional development must be available to teachers for the mastery of new ideas and skills. But the conceptual structure and theoretical underpinnings of the program should be valid, the substance of it well taught, and attention paid to the transfer of skills and knowledge to the classroom for schools to gain maximum benefit from it.

Findings of this study would provide those making decisions about appropriate inservice programs, presented commercially, with an evaluative framework for exploring the efficacy of those programs, in terms of their cost-effectiveness. It assists policy makers who distribute funds to organisations competing for professional development monies to recognise effective inservice programs. The study would inform principals of the characteristics of successful inservice programs and their facilitators and allow them to understand a crucial component of professional development—the follow-up support for their teachers as they implement skills and knowledge learned in inservice programs. Additionally, findings of this study would help those designing inservice programs to ensure that models are presented in ways which are not only enjoyable and non-threatening, but which contain sound, well-researched theoretical underpinnings, presented in a language which is meaningful to teachers.

Research design

In the design of a study which involves the critical analysis of an off-site inservice program and its presenter—teachers' perceptions of what they gained from it, what teachers reported as implementing, and what could be observed as having been implemented—appropriate data gathering techniques need to be employed to capture the multiple factors which will influence both the workshops and the implementation of skills and knowledge learned in it. Data gathering took account of the following influences on workshop acceptance and implementation.

Teachers came to the *Teaching for Effective Learning* workshops from different backgrounds, with differing levels of commitment, skills, knowledge, attitudes, training, experiences and range of information-processing styles. Teachers were shaped by, and in turn shaped, the events of the workshop, then returned to their schools, each school with its own budgetary policy, culture and administrative environment. Each school had a culture that constrained or reinforced aspects of what teachers brought back. The 'message' and attitude

that teachers brought back, such as enthusiasm or neutrality, may have influenced decisions in different ways, and lead to greater or lesser support. The students came to lessons, each with their own level of commitment, interest and ability. The teachers interacted with students and these interactions influenced each teacher's learnings from the workshop and the level of implementation.

In this study, a multi-model, and multi-site design was used to ensure richness of data, and to take account of the multiple events within it. The study was devised as two distinct components, conducted in two phases, to examine both the inservice workshops and implementation in schools.

Phase 1 was aimed at providing a detailed analysis of Atkin's inservice model, in theory and practice, as taught in the *Teaching for Effective Learning* workshops, prior to designing instruments to gather data for the second phase, a study of the model in practice in classrooms. In this first phase participant observation, direct observation, document analysis and interviews were used to gather data.

In 1991 the researcher attended one of a series of *Teaching for Effective Learning* workshops as a participant observer, and the following year a six-day series (three, two-day workshops) were video-taped in order to comprehend the theory and practice of the workshops, Atkin's personal style of presentation, and what participants learned which could be implemented in classrooms. To develop an understanding the conceptual structure of Atkin's workshops, that is, her Framework for Effective Teaching, a document analysis was undertaken, using Atkin's publications (1978, 1984, 1990, 1992a, 1992b, 1993, 1994), her unpublished PhD thesis (1977) and the *Inservice Course Notes* (1992b).

Phase 2 was aimed at examining teachers' perception of Atkin and her workshops, the impact of her workshops on classroom use and the influences on the teachers' attempts to implement what they had learned in the workshops. Methodology involved *method* and *source* triangulation and consisted of three sources of data, and four types of data gathering methods: observation, interview, document analysis and a questionnaire.

In 1993 six teachers were observed and interviewed three times over the year in which they attended the workshops. This was to ascertain levels of implementation of the Framework. One visit was made to each of four teachers prior to attendance at the workshops, to all six in the middle of the year and after completion of the final workshop. The following year two teachers from this group who had been identified as using aspects of Atkin's Framework for Effective Teaching, were observed for a further ten full working days to ascertain their behaviour and perceptions a year after completion of the workshops and to supplement findings from previous observations.

Two other groups of teachers (N=15) who had attended two different series of workshops were also used to gauge implementation. Both groups of teachers provided self-report data, one through interviews (ten teachers) and the other through a questionnaire (fifteen teachers). In this manner, all practising teachers who had completed six days of Atkin's inservice workshops between 1991 and 1993 were involved in the study. Thirty one teachers were involved in total.

Structure of the thesis

As part of the analysis of Atkin's Framework for Effective Teaching, it was considered important to ascertain the veracity of the Framework and whether Atkin had developed new ideas about teaching and learning or was simply reflecting what others had written on the subject. Chapter 2 therefore reviews the major writings in the field which relate to the 'dimensions' of Atkin's Framework for Effective Teaching. Chapter 3 examines the literature related to professional development, inservice, teacher knowledge and factors which influence implementation. The issue of transfer, an assumed outcome of inservice workshops, is addressed. Chapter 4 describes the study and methodology used, Chapters 5 and 6 present an analysis of the results of Phases 1 and 2: the impact of Atkin's Framework for Effective Teaching and the impact of the presentation of the workshop, and the results of teachers' perceptions of Atkin's personal style of presentation. Finally, Chapter 7 discusses and draws conclusions regarding the findings of the study. This chapter also suggests

directions for future research. A detailed description of Atkin's Framework for Effective Teaching, along with a the history of its development, and a description of the Framework in practice as enacted in the *Teaching for Effective Learning* workshops, have been attached in Appendix 1 for further clarification. As it was considered essential that Atkin was not misrepresented in the study, the description of her Framework for Effective Teaching was presented to her for verification. After six months there was no response from Atkin.

Terminology

Throughout the thesis Atkin's terminology is used where appropriate. Thus 'Framework' (Atkin, 1993, 1994) is used to encompass three 'dimensions' (Atkin, 1994) which make up the Framework for Effective Teaching, that is, the conceptual structure of the *Teaching for Effective Learning* workshops. The term 'model' refers to one aspect of Atkin's Framework, that is her *Integral Learning* model (1992b).

Limitations of the study

This four year study was a very extensive examination of one inservice workshop, its presenter, teachers' perceptions of what they had gained from the workshop, what they claimed to be putting in practice and what some were observed to be putting into practice. It also ascertained those factors which hindered implementation. A multi-model approach over an extensive period meant that the data gathered was a comprehensive account of the phenomena.

Lack of resources and research assistance prevented a study of more than one inservice program, and dealing with the day-to-day contingencies of primary school classrooms, when attempting to observe teachers and students, also meant that there was a reliance on self-report data. Given that this was a case study of one inservice program, lessons which might be drawn from it will be treated cautiously if they are to be applied elsewhere.

Permission to undertake the study

Written permission was received from the Tasmanian Department of Education and the Arts to conduct research in Tasmanian schools, and formal letters of requests were signed by Atkin and all the teachers who were to be observed. Clearance was also provided by the University of Tasmania Ethics Committee. Verbal permission for interviews was obtained from one group of teachers. A request to complete a questionnaire was made to another group and this was included with the questionnaire.

Summary

This introductory chapter has provided the background against which the study of an inservice program was undertaken. It showed the changed context in which decisions are made regarding teacher professional development. That is, in the context of self-managing schools in which principals and senior staff are responsible for decisions about competing claims on the school budget. In allocating funds for staff professional development, those responsible must have concerns about the best use of resources. Yet at a time when schools are increasingly using private inservice providers, no in-depth examination has been done in Australia on such programs. This study therefore has filled a gap in the literature on such investigations.

In addressing Research Question 1, this study involved first, a detailed investigation of the theory and practice of Atkin's *Teaching for Effective Learning* workshops. To develop an understanding of its conceptual structure (Atkin's Framework for Effective Teaching), a document analysis was undertaken involving the following documents: five papers (Atkin, 1984, 1990, 1992a, 1993, 1994); Atkin's unpublished PhD thesis (1977) and *Inservice course notes* (1992b). The last document was provided to participants in Atkin's 1992 and 1993 *Teaching for Effective Learning* inservice program. To examine the Framework in practice, a six-day series of the *Teaching for Effective Learning* workshops were video-taped in 1992. Transcripts made from the video-tapes were analysed to determine congruence between the Framework in theory and in practice, and in order to recognise the Framework in practice in classrooms, as enacted by teachers. This indepth study of the theory and practice of Atkin's workshops was considered important for the data-gathering stage, which examined the impact of the workshops in terms of implementation in classrooms. The results of answering this component of Research Question 1 are presented in Appendix 1, as a detailed description of Atkin's Framework for Effective Teaching and its practice as enacted in the *Teaching for Effective Learning* workshops.

The second aspect of addressing Research Question 1 involved a review of the literature on teaching and learning which related to Atkin's Framework for Effective Teaching. This task was undertaken to ascertain the Framework's theoretical underpinnings, the consistency between it and research on teaching

and learning, and to establish it as an innovation. This chapter presents that literature review.

An examination of conceptual structure of the *Teaching for Effective Learning* workshops through document analysis, together with analysis of data gathered from observing a workshop in practice, revealed that Atkin's Framework for Effective Teaching was comprised of three major dimensions, namely: (i) *relationships* between students and teachers, (ii) *psychological conditions* of learners to be taken into consideration when designing learning experiences, and engaging (iii) *appropriate mental processes* necessary for given tasks. The following literature review is structured according to the three dimensions of Atkin's Framework.

The reader will note that many of the citations in this chapter relate to primary sources which were published in the 1960s, 1970s and 1980s.

Dimensions of Atkin's Framework for Effective Teaching:

(i) *Relationships in learning*

One of the three dimensions identified by Atkin (1994) as necessary for effective teaching, is the relationships between teachers and students. Relationships, she asserts, create the safety factor which allows students the freedom to take risks with learning, for 'we don't learn unless we take risks and we won't take risks unless we have a secure base to fall back on' (p. 5). Atkin argues that the positive regard a teacher has for his or her students can help develop and maintain a student's self esteem, and that regard for students may manifest itself in a teacher's belief in the student's capacity to learn and an expectation that learning will occur.

Although Atkin does not directly make reference to the field of humanistic psychology as a source of her ideas, she acknowledges that readers of her publications 'will find connections' (1994:3) between her ideas and those of people such as Carl Rogers (1969, 1983). Atkin uses terminology that is prevalent

in the works of Rogers . He and other humanistic psychologists such as Truax & Carkhuff (1967), use the following terms: 'non-possessive regard', 'empathy', 'warmth' and 'genuineness'. Atkin uses similar terms when she refers to concepts such as 'security', 'self-esteem', 'unconditional love', 'care and concern for' 'expectation of' 'acceptance' and 'belief in' when describing the nature of teacher-student relationships which enhance learning.

A survey of the literature applying to teacher/learner relationships reveals that the broad idea of teacher/learner relationships is a concept widely dealt with, particularly by researchers in the 1970s (for example, see Brophy & Good, 1974), by educational philosophers, for example, Hirst & Peters (1970), and Wringe (1976), and it is found in educational texts for teachers such as Briggs & Potter (1990), Barry & King (1993) and Cole & Chan (1994).

People have been trying to establish an association between teacher/student relationships and learning since Socrates and Lao Tse, according to Neville (1989:263), but, he claims, it is only in this century that a concerted effort has been made to verify that connection.

Some of the 'concerted efforts' were a series of correlational and experimental studies, undertaken mostly in the 1970s, which attempted to show a connection between teacher-student relationships and student learning outcomes. Aspy & Roebuck (1977:13), in studies exploring the relationship between teacher behaviour and student achievement, used the Carkhuff Interpersonal Processing Scale (1977) to evaluate teachers, while the students were tested on the Stanford-Binet Intelligence Test. The students' levels of cognitive functioning for memory and thinking were tested on an adaptation of Metfessel, Michael & Kersner's Instrumentation of Bloom's Taxonomy of Educational Objectives (1969). Aspy & Roebuck (1977) found that the training of teachers in a programme involving interpersonal skills of empathy, congruence and positive regard was 'positively and significantly related to students' cognitive growth, students' I.Q. gains, and students' attendance' (p. 15). They also found that prior to the training many teachers were actually hindering learning through inappropriate behaviour.

Aspy & Roebuck (1977) interpreted these findings as showing that interpersonal skills per se did not improve learning, but when integrated into the learning context they did (p. 203). Atkin (1994:4) makes a similar claim when she describes the interwoven nature of relationships and learning experiences as the 'warp and weft' of teaching.

However, Dunkin & Biddle (1974), in reviewing approximately one hundred studies of teacher 'warmth' found less certainty in findings. The majority of these studies used an observational instrument, the Flanders Interaction Analysis Categories system (FIAC) (1963), or related instruments, which Dunkin & Biddle point out, have three categories which 'have generated substantial findings that appear to relate to the global concept of warmth. These are teacher *praise*, teacher *acceptance of pupils' ideas* and teacher *criticism*' (p. 120). Atkin does not use the term *praise*, rather, *acceptance* is one used in her framework, while she makes no reference to *criticism* in terms of good relationships. Findings in the process-product relationships for these three categories varied, and in many instances were in contradiction. For example, Dunkin & Biddle (1974) found that in eleven studies 'teacher praise is unrelated to pupil achievement' while in another three studies, 'higher teacher praise is associated with greater pupil achievement' (pp. 121-26). Other examples cited by the authors were that 'teachers' acceptance of pupils' ideas is unrelated to pupil achievement' (six studies), while 'greater acceptance of pupils' ideas is associated with higher pupil achievement' (one study). Another example of the inconsistency they found was that in seven studies 'teacher criticism is unrelated to pupil achievement', while in six studies, 'greater criticism is associated with lower pupil achievement'. Dunkin & Biddle (1974:132) concluded that there appears to be some relationship between pupil outcomes and teacher praise, teacher acceptance of student ideas and teacher criticism, though 'the case for warmth is not yet demonstrated'.

At the time that the correlation and experimental studies of classrooms and teaching were being undertaken, Berliner (1976) identified problems of research concerning studies of teaching which attempted to show causal connections between teacher behaviour and student outcomes. Berliner maintained that these

studies were problematic for three reasons, namely concerns about instrumentation, methodology and statistics. Berliner (1976) argued that 'we need guidance on what techniques to use for measuring changes in the achievement of students in natural classrooms' for the 'problems, issues and concerns' simply highlight that teaching is 'a very complex set of events which cannot be easily understood' (p. 380).

More recently, Phelan, Davidson & Cao (1992) in an ethnographic study which made no attempt to isolate variables of teaching behaviour, investigated students' perspectives of their total school experience, including their perceptions of their relationships with their teachers. Over a two year period, Phelan et al. (1992) used 'periodic interviews, classroom observations, and analyses of student records to identify factors that affect students' engagement with schools and learning' (p. 696). They found that the impact of a warm, caring classroom climate depends on the achievement level of the students. Fifty four students from a range of ages, backgrounds and schools were studied over a two-year period. With regard to student relationships with teachers, Phelan et al. (1992) found a strong consistency in students' preferences for teachers who care about their welfare, however, they found different interpretations of caring in low and high achieving students. High achieving students interpreted caring as taking an interest in their academic progress; low achieving students, on the other hand, interpreted caring in terms of teacher characteristics such as patience, humour, tolerance and listening ability. Low achieving students preferred one-to-one assistance with their work and saw a caring teacher as one interested in more than just their academic status, and one who also affirmed them as people. These researchers also found that student grades varied considerably between teachers. Some low achieving students performed very well in classrooms where they perceived themselves as valued. In addition to openness and consideration as desirable teacher characteristics, students in this study rated humour highly, for its ability to overcome age and class barriers. The Phelan et al. (1992) study, while providing a quantity of useful data, reinforced the point made by Berliner (1976) that it is difficult to use an experimental framework in researching classrooms and teaching.

Recent texts for teachers placed different emphases on relationships between teachers and their students, but all supported Atkin's claim that personal relationships are an important component of effective teaching. Barry & King (1993) assert that it is incumbent on teachers to pay attention to their relationship skills and human dimensions of the classroom and these authors' advice to teachers is couched in terms such as 'warm', 'natural', 'pleasant', 'approachable' and 'tolerant' (pp. 94–5). In their text for teachers of children in the early years of schooling, Briggs & Potter (1990:177) maintained that a classroom for young children should be 'caring, open, nonthreatening, trusting, nonjudgemental, secure, happy, inviting, child-centred, encouraging and accepting'. Further they describe environments which enhance the self-esteem of children as those in which children (amongst other factors) 'perceive a sense of warmth and caring', and 'are respected as individuals'. The terminology is similar to that of Atkin, but it is important to note that Atkin does not include the Briggs & Potter (1990) term 'respect' in her Framework for Effective Teaching.

In their writings, educational psychologists deal with teacher/student relationships to varying degrees and with different emphases. For example, Gage & Berliner's (1988) text, *Educational Psychology*, contains a section on humanistic approaches to learning and cites, amongst other objectives of that approach to learning, the principle of humanistic education 'that learning is easiest, most meaningful, and most effective when it takes place in a nonthreatening situation' (p. 491). Biggs & Telfer (1987:376) approached the subject of personal relationships both in terms of humanistic psychology and classroom management and climate. They described a range of classroom situations but made no judgements about which is most appropriate, encouraging teachers instead to be aware of their own and students' agendas in the management of the classroom. Biggs & Telfer (1987) claimed that 'the management decisions and climate together make the total learning environment in both cognitive and affective aspects'. Atkin comes close to the language of McInerney & McInerney (1994:557), when they use the term 'loving and warm', as one of many characteristics of good teachers.

Atkin's references to teacher/student relationships focus upon characteristics of interaction drawn from humanistic psychology, and she uses terms similar to those used by Rogers (1969, 1983) and other humanistic psychologists. However, in Atkin's publications these sources are not always acknowledged, nor does she cite research studies which deal with a range of variables that may affect teacher/student relationships.

Dimensions of Atkin's Framework for Effective Teaching:

(ii) *Psychological conditions* for learning

A dimension of Atkin's Framework is the *psychological conditions* necessary for effective learning. Examination of the concepts contained within this dimension suggest they are derived largely from the field of cognitive psychology. Literature relating to aspects of this dimension will be examined.

According to Atkin (1994) designing learning experiences involves paying attention to what she describes as the psychological conditions needed for learning to occur. She holds that effective learning requires *motivation* and 'is characterised by many but not necessarily all of' (p. 10) the following elements: *challenges, a sense of achievement, readiness to learn, emotional involvement* and *student ownership* in learning. Each of these 'conditions' will be examined in relation to the relevant literature.

Motivation

Motivation is a major factor in cognitive learning theory. According to Atkin (1994:9) *motivation* is

critical for effective learning to occur. The source and type of the motivation varies. It may be *trauma* induced such as in an accident situation or an experience of emotional trauma. In those incidences the learning is survival oriented, it is generally indelible and one incident can be life changing. Motivation may also arise out of a personal need or purpose. The personal need may be *external* reward of some form, for example a salary rise. The motivation may be purely intrinsic—a drive from within to learn. As discussed earlier, "significant others" can also

provide a source of inspiration through encouragement, expectation, modelling and their ability to enthuse...Fear of failure can also serve to motivate if you believe you can achieve.

In addressing the concept of motivation, Atkin uses terms such as 'trauma induced', 'external reward', 'intrinsic', 'significant other' and 'fear of failure'. The literature (see for example, Bandura, 1967; Thornburg, 1984; Gage & Berliner, 1988) deals extensively with all but one of these concepts. No reference could be found to the term '*trauma induced*'. Motivation arising out of personal need, 'such as an external reward...or the drive from within to learn' (p. 9), is repeatedly referred to in the literature as *extrinsic* and *intrinsic* motivation. For example, Biggs & Moore (1993:259) claim that a student is extrinsically motivated to learn when the consequence of the learning task is a reward, such as material gain, or avoidance of a negative outcome such as punishment. Gage & Berliner (1988:361) define intrinsic motivation as 'motivation without apparent reward' and make the distinction between this sense of 'intrinsic' and that which 'refers to rewards inherent in the activity itself'. They maintain that the judicious use of external rewards can lead to intrinsic motivation and therefore should be accepted as a useful motivation strategy. Thornburg (1984:514) defines extrinsic motivation as 'the desire to act if appropriate incentives are created within the environment', and intrinsic motivation as 'an inner drive to explore and acquire without dependency on external incentives' (p. 515). Similarly, Cole & Chan (1994:349) include intrinsic and extrinsic 'motivational orientations' in what they describe as the value component of motivation. The value component relates to the students' perceptions of the worth of a task and the direction of their energy towards one they perceive as worthwhile. McNerney & McNerney (1994:353) include *curiosity* as 'a major element of intrinsic motivation', but this idea is not included in Atkin's publications.

'Significant others' can also provide motivation, according to Atkin (1994), and they may be a 'source of inspiration through encouragement, expectation, modelling and their ability to enthuse' (p. 9). Learning from role models, such as teachers, forms the foundation of Bandura's social learning theory (1962, 1969,

1971, 1977, 1986). According to Bandura (1977a) observing others' behaviour, and the consequences of that behaviour for them, can create a vicarious learning situation for many. Biggs & Moore (1993:263) state that 'one of the most powerful influences on the way we value activities or their outcomes are what people value. We do things because it is important to us that we appear favourable in the eyes of significant others'.

Fear of failure 'can serve to motivate, if you believe you can achieve' (Atkin, 1994:9). Bandura's (1977b) self-efficacy theory addresses the issue of fear of failure and a person's belief about their capabilities. Self-efficacy, a specific form of self-concept, dictates the expectation that people approaching a task will have of their potential success. One of the sources of that expectation is derived from that to which the person attributes the success or failure of past performances. If success is credited to self, and failure to external sources, then there is a greater chance of success in the future and higher self-concept. Atkin does not consider in her discussion, Bandura's notion of Attribution. Similarly, tension is seen as a motivating factor by Hunter (1967), though the levels to which students will respond may depend on their sense of self-concept. Hunter maintains that if too much frustration exists, too much energy is devoted to overcoming that problem and motivation is diminished. The expectation of success in learning also plays a large part in motivation (Hunter, 1967; Biggs & Moore, 1993; Cole & Chan, 1994), though, like Bandura (1977a), Covington (1984) maintains that expectation may depend on the individual's self-concept or self perception. Atkin does not mention expectation of success as a motivating factor per se.

Atkin (1994:9) claims that effective learning is 'characterised by' a *sense of achievement*, something which 'comes through feedback and needs to be relatively immediate especially if motivation is low or waning'. In this definition Atkin seems to be using the term 'achievement' in a different sense from the term 'motivation'. This idiosyncratic use of the term is confusing. A review of the literature failed to find a reference to 'sense of achievement' though many references to 'achievement motivation', the term consistently used by cognitive psychologists in the literature (Ausubel, Novak & Hanesian, 1978; Thornburg,

1984; Gage & Berliner, 1988). Biggs & Moore (1993:264-268) view achievement as an ego enhancing process that occurs through social competition, with two motives in achieving situations: to succeed, and to avoid failure. Ausubel, Novak & Hanesian (1978) hold that achievement motivation consists of cognitive drive, affiliative drive, and ego-enhancement motivation. Their description of cognitive drive, 'the need for acquiring knowledge and solving academic problems as ends in themselves' (p. 411), resembles that which others describe as intrinsic motivation. Cognitive drive is task oriented whereas ego enhancement drive is concerned with acquiring status through competence. Affiliative drive is concerned with gaining the approval of significant people, particularly a teacher. Thus Ausubel, Novak & Hanesian (1978) use the term 'achievement motivation' in a sense which covers at least two of Atkin's sources and types of motivation ('significant other' and 'intrinsic').

Atkin (1994) makes reference to motivation as part of the psychological conditions of her Framework for Effective Teaching, and acknowledges the significance of motivation in learning. Her use of the term encompasses a wide range of meanings, which both agree with, and differ from, the recognised literature on motivation. It is interesting to note that in her publications Atkin makes no reference to any of the traditional psychological views on motivation, nor any well-known writers on the subject.

Challenges in learning

Atkin (1994:9) claims that effective learning requires *challenges*, not threats. However, she recognises that 'what challenges one person may well be a threat to someone else'. On this point, other writers have similar views.

Combs, Avila & Purkey (1971) point out that people tend to be threatened when faced with situations they cannot expect to effectively deal with, but challenged when a task is of interest and is in their capacity to solve. Creating an appropriate situation, where learning is a challenge and not a threat, is the goal of educators, though the threat to one may be a challenge to another. As these authors point out, 'the distinction lies not in the eye of the outsider but in the eye

of the beholder' (pp. 108-9). McInerney & McInerney (1994) and Gage & Berliner (1988) make a similar point but address the concept of challenges in terms of an intrinsic motivating factor. McInerney & McInerney (1994:353) claim that the level of challenge must be 'suited to the individual's perceived capacity so that the person's skills are put to a meaningful (relevant) test'. Gage & Berliner (1988:381) recommended a variety of teaching strategies which could be viewed as creating challenges in learning. For example they recommend that a teacher 'capitalize on the arousal value of suspense, discovery, curiosity and exploration' whereas Atkin appears to be only viewing the degree of challenge. Biggs & Moore (1993) claim that changes in cognitive structure, or learning, occur most effectively when the mismatch between input of new information and existing cognitive structures is at an optimal level; if a task is too easy it may be considered boring, and if too difficult it will be avoided. These researchers argue that, since human beings have an intrinsic need to maximise competence, and that curiosity is a natural process which human beings use to help in cognitive development, teaching should recognise this innate desire to learn, while not destroying that desire through the use of over-difficult tasks.

Appropriate challenges in learning could be viewed as a means of closing the gap between a child's potential to learn and his or her actual development level, described by Vygotsky (1978), as the *zone of proximal development*. Vygotsky maintained that effective instruction occurs when a competent educator recognises the potential of a child and provides learning experiences that develop that potential. Vygotsky claimed that a child working alone provides information about his or her actual development level and asserted that effective teaching enriches those aspects of the child's cognitive and physical development which are in the process of maturing. In this situation it could be argued that a teacher should provide appropriate challenges, such as problem-solving activities, to stimulate the child's development.

No dissent from Atkin's claim for the necessity of challenges in learning could be found in the literature, though some authors differed from her, in viewing challenges as a motivating factor. The word 'challenge' appears in a complex

concept map of Atkin's entitled "Psychological conditions of effective learning" (see Appendix 1), as one of 36 separate but interrelated concepts, but with no qualifying reference.

Readiness to learn

Atkin (1994:9) describes *readiness to learn* as the time when a student exhibits 'emotional and cognitive readiness' in a given situation which 'can be a very powerful learning experience'. At another time, a similar experience may not characterise readiness to learn, because emotional and cognitive readiness was not evident. The sense in which Atkin uses the term *readiness to learn* appears to differ from some cognitive psychology texts (for example, Ausubel, Novak & Hanesian, 1978; Bruner, 1979; Gagné, 1970, 1977; Gage & Berliner, 1988).

According to Ausubel, Novak & Hanesian (1978:209), the principle of readiness to learn is 'the idea that attained developmental capacity limits and influences an individual's ability to profit from current experience or practice'. Ausubel et al. (1978) claimed that this is 'empirically demonstrable and conceptually unambiguous'. It means the instructional designer must arrange a learning situation which takes into account, and takes maximum advantage of, the learner's cognitive capacities and means by which he or she assimilates new information. Gagné (1970) also advocated structuring learning to take account of what is already known, stating that 'the stage of developmental readiness of any learner is determined by what s/he already knows and by how much s/he has yet to learn in order to achieve some particular learning goal' (p. 298). Planning for optimal learning, according to Gagné, takes into account the learner's *internal* conditions (previously learned capabilities), and *external* conditions, which may be specific to the learning task, and these include environmental stimulation such as teacher instruction.

Bruner (1979:108) appeared to be referring to the structuring of a situation to create readiness to learn, when he said that 'readiness...is a function not so much of maturation as it is of our intentions and our skill at translating ideas into the

language and concepts of the age level we are teaching'. Bruner proposes an inductive approach to learning moving from the particular to the general, using small components of learning, close to the learner's experience, and leading towards an assembly of those components into a coherent whole, or a principle or theory. Gage & Berliner (1988) advocated a similar process for readiness training for complex tasks such as reading, in which the process can be broken into subtasks for easier learning, before combining the subtasks into more complex activities. However Gage & Berliner (1988) caution that direct teaching of some tasks is more efficient. It is often 'better to teach children exactly what we want them to know' (p. 323) rather than employing curriculum designed to improve students' readiness for learning.

Though Atkin uses the term *readiness to learn*, she appears to relate it to a given situation or time that a teacher needs to recognise, rather than a teacher being responsible for structuring readiness. In this there appears to be an emphasis on an appropriate unfolding, rather than a more focussed attention on instructional teaching. For example, Atkin provides a description of readiness to learn whereas Ausubel et al. (1978), Bruner (1979), Gagné (1970, 1977), and Gage & Berliner (1988) refer to planning and instruction aimed at taking the learner ahead from his or her current level of functioning in a specified developmental sequence. Atkin's use of *readiness to learn* is a much narrower, more particular use of the term.

Ownership in learning: Students' freedom to choose

Atkin (1994:10) describes an important psychological condition as being a degree of freedom to learn which fosters *ownership*. This freedom, Atkin claims, should be for students to have an element of control 'to choose, to experiment, to make mistakes, to set their own goals at their own pace and in their own time'.

A similar sentiment was expressed by Rogers (1983), a humanistic psychologist, who claimed that children should have control of their own learning. For Rogers, a teacher should be a facilitator who creates an environment in which children are free to take risks and learn from mistakes, because, he claimed, children who

have freedom in learning are 'eager to learn, they follow up on their own leads and engage in a great deal of independent study of their own' (p. 136). Two basic objectives of humanistic education, according to Gage & Berliner (1988:484), are 'to increase learners' self-direction and independence', and 'to help students take more responsibility for determining what they are learning'. An assumption of humanistic education, Gage & Berliner (1988) assert, is that students can achieve good academic outcomes because the emphasis on children learning what they want to learn, in a safe learning environment, encourages 'free growth' and self-direction in learning.

The preceding section has shown that, in the second dimension of Atkin's framework, the *psychological conditions of learning*, Atkin has used a range of concepts, which a review of the literature shows are not new to education (for example, 'motivation'). Most of what she refers to is well supported. The term 'conditions of learning' is also not new, having been used by Gagné (1977:3) to describe 'sets of circumstances that obtain when learning occurs, that is, when certain observable changes in human behavior take place that justify the inference of learning'. Atkin's *psychological conditions of learning* includes constructs such as *motivation* which are dealt with as separate entities in the field of cognitive psychology. In this sense, Atkin's use of the terminology *psychological conditions of learning* is more global in nature, as distinct from Gagné's theory concerning conditions of learning. It should be noted however, that no specific reference is made to theories of cognitive or humanistic psychology in any of Atkin's publications, despite the fact that most of her theories can be found in that well-established literature. In the preface to her monograph *How Students Learn: a Framework for Effective Teaching, Part 2, Conditions which Enhance and Maximise Learning*, Atkin (1994) claims that

I have not attempted to draw out the parallels between the ideas I have synthesised from my work with learners and teachers and the work of other educators and researchers, but no doubt many readers will find connections between the ideas contained here and the work of other educators and researchers, such as Abraham Maslow, Lawrence Kohlberg, Carl Rogers, Martin Buber, A.S. Neill, and John Holt among others (p. 3).

Dimensions of Atkin's Framework for Effective Teaching:

(iii) *Appropriate mental processes for learning*

The third dimension of Atkin's Framework for Effective Teaching, *appropriate mental processes for learning*, is the clear focus of her publications until 1994, and the *Teaching for Effective Learning* workshops observed in 1992. Central to it is her model of *Integral Learning* (1992).

The document analysis of Atkin's Framework for Effective Teaching showed that the constructs which underpin this dimension were constructivism, theories of memory, and theories of brain functioning. A published monograph, *How Students Learn: A Framework for Effective Teaching, Part 1, Thinking—Critical for Learning* (1993), which summarises the third dimension of Atkin's framework, was used as a reference point for the following examination of the relevant literature. Where concepts are expanded, such as in the *Inservice course notes* (1992b) and in her presentation of the workshops, these sources will be referred to.

The contents page of Atkin's 1993 monograph includes the following:

Snapshots of Learning Experiences

- Learning
- Constructivism: a view of the nature of human learning

Thinking

- What is the nature of the mental processes involved in learning with meaning?
- Simplified anatomy of the brain
- Three brains in one
- How does the brain process information?
- A four quadrant model of brain processing
- Preferred ways of thinking

Integral Learning

- A model of the mental processes required for learning with meaning

A review of the literature was undertaken which related to concepts that are similar to those above, in an attempt to ascertain the similarities and differences between other writers and Atkin's work.

Learning

Atkin (1993) represents the concept of learning in the form of a concept map (see Appendix 1). She also presents a view of learning as expressed by participants in her workshops over a five year period. The 'collective responses', she says, fall into five categories:

- 1 gaining information, facts
- 2 making connections, understanding, insight
- 3 being able to do, applying
- 4 feelings, emotions—enjoyment, frustration etc., and
- 5 a fifth category which is related to the result or impact of learning—responses like *Learning is changing* (p. 5)

The subject of human learning is a 'large and active field of concern' (Gage, 1963:132). Research concerning the nature of learning and the way learning occurs forms a major focus of the field of psychology (for example, Bruner, 1960; Hergenhahn, 1976; Ausubel, Novak & Hanesian, 1978; Gardner, 1982; Novak & Gowin, 1984; Gagné, 1985; Entwistle, 1987; Nuthall, 1994; McNerney & McNerney, 1994).

Theories of learning have traditionally had their origins in three fields of psychology: behavioural, cognitive and humanistic. More recently Entwistle (1987:5) used a five category system to describe the range of learning theories, concepts and application: behaviourist; information processing/cognitive; individual differences; interactionist and experiential. Entwistle includes three major learning theories and theorists in the 'experiential' learning category, namely, approaches to learning (Marton & Säljö, 1984), self esteem (Covington, 1984) and humanistic theory (Rogers, 1969).

Notwithstanding Entwistle's (1987) classifications, the behavioural, cognitive and humanistic psychological models have dominated much of the literature and an analysis of Atkin's framework indicates that she drew on all three approaches, though predominantly from the cognitive and humanistic fields of psychology.

A standard, general text in the area, Biggs & Telfer (1987) indicates that, for behavioural psychologists, the emphasis in learning is on 'content learning expressed in terms of behavioural change' (p. 31). Highly structured learning experiences are planned so that behavioural changes can be identified as a result of that experience. Teaching strategies are designed in small achievable steps (programmed instruction), each of which is tested in order that the student can progress to the next stage. A teacher using a behavioural approach arranges an environment which allows the learner to be rewarded for behaving according to predetermined 'behavioural objectives'. Skinner (1968), a proponent of this approach to learning, concluded that learning depended on three requirements: first, that tasks to be learned needed to be broken into small steps; second, the learner requires immediate feedback as to the correctness or incorrectness of the learning, and third, the learners should be able to learn at their own pace. Biggs & Telfer (1987) describe Skinner's learning theory as involving rewards for initial success and repeated at intervals thereafter, and that behaviour could be progressively shaped, through reinforcement, until the desired behaviour was obtained. In this sense learning is structured for the learner who has little control over it.

Atkin describes a need to 'break the task down into smaller steps' (Source: Transcript of video-tape of *Teaching for Effective Learning* workshop, March, 1992). However, it is open to question whether or not she intends this breaking down of tasks in the same way as the behaviourists do. Atkin makes no reference to reward or punishment, though she does stress the importance of feedback (1992b). It would appear that Atkin's approach to learning is minimally behavioural.

The cognitivist approach to learning, according to Biggs & Telfer (1987:19), 'assumes that people try to *make sense* out of their environment rather than react unthinkingly to it'. They point out that cognitivism is an information processing approach to learning in that it emphasises the internal, mental structures involved in the input, storage and retrieval of information. Teachers using this approach would emphasise the process of learning, tending to use discovery and inquiry methods rather than an emphasis on content. Cognitivists are concerned with sensory memory, short and long term memory, and see learning as a change in cognitive structures. Long term memory contains schemata of images and concepts built up from experiences of the world. When we make sense of new information by creating links between new images and concepts and existing concepts, factual knowledge and previous experience, we are learning meaningfully (Entwistle, 1987). Atkin (1993) claims to draw on 'facets of cognitive functioning—such as the features of working memory; short term memory; accessing information in long term memory and sensory modality preference' in developing her Framework for Effective Teaching. This is clearly demonstrated in the *Inservice course notes* (1992b) and in the workshop presentation which includes a substantial time allocation to the concepts of sensory, short and long term memory. Atkin's PhD study (1977) focussed on cognitive functioning and memory.

'Rote' and 'meaningful' learning are concepts addressed in the literature and by Atkin; in fact meaningful learning is the underlying concept of her model of *Integral Learning*. According to cognitive psychologists, Ausubel, Novak & Hanesian (1978), classroom learning can be located on a range between 'rote' and 'meaningful' learning. They hold that to learn meaningfully, new material must be within the learning capacity of the individual, and it must relate to what is already known. The learner must also have a desire to learn, or a meaningful learning set. Rote learning on the other hand occurs when the learner lacks sufficient prior knowledge with which to relate new materials; when the task involves 'purely arbitrary associations' (p. 27), or when there is a desire to learn in a verbatim fashion, without meaning. To facilitate meaningful learning and to aid long term memory, Ausubel et al. (1978) advocated the use of 'advance

organisers', to act as a framework for providing the link between existing knowledge and new material to be learned.

Atkin appears to use the concept of 'experiential' learning in the sense that Kolb (1984) used the term, to achieve the link between new knowledge and prior knowledge to which Ausubel et al. (1978) refer. This will be examined in relation to Atkin's model of *Integral Learning*.

Humanistic psychologists focus on the individual in learning. Rogers (1969, 1983), a prominent humanistic psychologist, claimed that 'significant learning combines the logical *and* the intuitive, the intellect *and* the feelings, the concept *and* the experience, the idea *and* the meaning' (p. 20).

There is a considerable resemblance between Rogers' assertion and Atkin's *Integral Learning* model which she describes as one that explains her 'current understanding of learning. Learning which involves the integration of our experiences, our feelings, our reflections, and our actions is *integral* to being human' (p. 17). Atkin also appears to draw on a humanistic approach to teaching and learning when she places an emphasis on 'relationships' in learning, a 'conducive' environment, 'emotional involvement' in learning, and giving students choices which foster ownership.

Constructivism

Atkin (1993:17) maintains that her *Integral Learning* model 'is consistent with a constructivist model of learning', but does not provide a detailed explanation of what she means, other than to quote Novak (1990):

There is a belief shared by most psychologists who study human learning, that from birth to senescence or death, each of us constructs and reconstructs the meaning of events and objects we observe. It is an ongoing process, and a distinctly human process (1990:1).

Malone & Taylor (1993:v) maintained that the constructivist epistemology has become a feasible alternative to the traditional 'transmission' approach to

learning, and that one of the best known conceptions of constructivism is Ausubel's theory of meaningful learning. McInerney & McInerney (1994:95) hold that Piagetian concepts gave rise to constructivism, maintaining that

Piaget's basic position is that our knowledge is primarily constructed from our own actions in the process of regulating our interactions with the world. By actively coordinating actions from different situations or contexts, the person stores or "internalises" actions that can be reused as representations to anticipate action in other contexts.

Thinking

Atkin does not specifically define her use of the term 'thinking', but says that it is 'critical for learning' (*Thinking—Critical for Learning*, 1993). A heading in the monograph, **Thinking**, is followed by the questions:

What is the nature of the mental processes involved in learning with meaning? How does our brain enable us to remember, to imagine, to feel, to think, to solve problems? How does our brain enable us to reflect, to do and to learn? (p. 8).

What follows in the monograph are Atkin's answers to these question, which she first summarised as follows:

In an attempt to be more explicit about the 'reflection' process of Richard Bawden's and David Kolb's model of learning, to be more explicit about the meaning-making of a constructivist view of learning, I have found it useful to draw on what is known about the evolution of the human brain and what is known about the processing modes of the two hemispheres of the brain. Facets of cognitive functioning—such as the features of working memory; short term memory; accessing information in long term memory and sensory modality preferences; as well as more recent research on 'modules' and 'centres of talent' (Ornstein 1991)—all serve to enrich our understanding of the nature and process of learning both at a generic level and at the level of individual differences in learning (p. 8).

Atkin appears to be using the term 'thinking' to relate to two broad concepts: cognitive function of memory, and brain evolution and brain function theories. The first is well supported in the cognitive psychology literature, the latter has a body of literature which depicts brain function, though the connection between

brain function and learning theories is controversial. Despite the claim that there is no proven connection between brain hemisphere functioning and improved learning (LeBon, Smith, Tenney & Thompson, 1994), there are a number of learning style theorists (Reynolds & Torrance, 1978; Herrmann, 1989; McCarthy, 1990; Caine & Caine, 1990; Dunn & Dunn, 1993) who claim that structuring teaching based on awareness of student learning styles, in terms of brain hemisphericity, will enhance learning. Caine & Caine (1990) and Herrmann (1989) adopt what they describe as a 'whole brain' approach to teaching and learning, which they claim engages all functions of the brain, in order that students acquire a broad and flexible approach to learning. Torrance & Rockstein (1988:279) advocate an emphasis on, and the development of, teaching and learning strategies which are based on 'a fully functioning brain'. An instrument developed by Torrance, Reynolds & Ball, *Your Style of Learning and Thinking* (SOLAT, 1977) 'is based on knowledge about thought processes which are identified with the functions of the left and right hemispheres of the brain' (p. 278).

The use of left brain/right brain theories in learning is controversial. Critics of the use of left/right brain functioning, such as Millard & Nagle (1986), caution against the use of mind-brain research as the basis of the development of curriculum material. In a particular review of studies relating to the link between mind-brain research and the teaching of composition, these researchers identify four concerns, namely the unusual experimental conditions which produced incongruous behaviour; recent findings which indicate that language is not solely based in one hemisphere, therefore axiomatic conclusions cannot be drawn; many classrooms not equipped to determine an individual's brain functioning, and existing knowledge of brain specialisation for language which cannot be translated to the complex task of writing.

LeBon, Smith, Tenney & Thompson, (1994) are highly critical of the use of brain function theory in teaching and learning and cite Atkin as one of a group of adherents to the theory of brain functioning and learning. First, Le Bon et al. (1994) claim that 'when reputable neurology research sources are cited by these proponents of brain function, they are typically either misquoted or quoted out

of context' (p. 63). Further they claim that 'complex neurological theories are so oversimplified as to be misleading, that contrary research data is ignored and outcome data is lacking' (p. 63). Additionally they assert that in claiming that student outcomes can be improved through the use of brain function theory, advocates are ignoring 'formidable research which indicates these approaches are ineffective' (p. 63).

Atkin cites the work of Edwards (1979) as an example of how people can move from operating from one brain hemisphere to the other. In her book, *Drawing on the Right Side of the Brain*, Edwards advocated strategies to promote what she described as R-mode, or 'right brain' thinking to shut down L-mode or, as she asserted, the logical, language-oriented left brain, in order to more effectively draw images. In 1984, Youngblood, an art educator, criticised Edwards' (1979) use of the theory of brain lateralisation in art education for what he saw as a simplistic view that the two hemispheres of the brain are mutually exclusive, and that a physical or cognitive act 'reveals something conclusive about concomitant brain events' (p. 56).

The popular images of the two hemispheres of the brain as having a 'division of labor' between the two hemispheres are, according to Gardner (1982), 'becoming increasingly remote from what is known or even suspected' (p. 278). Gardner is critical of what he described as 'overblown claims' about brain laterality. Though there seems to be evidence of patterns of hemisphere preference, he asserts that there is also evidence of diverse responses from individuals, and apparently sound evidence to support conflicting findings of behaviours assigned to a hemisphere, while both hemispheres contribute to the task. Many people, Gardner (1982:285) argues,

sincerely detect faults in our society, especially in its education system, and are eager to use any method at their disposal to bring about desired changes...It is high time for investigators conversant with brain lateralization to announce that the unknowns in the field dwarf the little that is known, and the little more that is suspected.

Thinking, in Atkin's terms relates to both the cognitive function of memory and theories of brain function. It appears that while she has some supporters for the connections she makes between theories of brain function and learning (Torrance

& Rockstein, 1988; Herrmann, 1989; Caine & Caine 1990; Dunn & Dunn, 1993), there are others (Millard & Nagle, 1988; LeBon, Smith, Tenney & Thompson, 1994), who maintain that research studies have not demonstrated adequately that such connections do exist.

Integral Learning

Atkin (1993) argues that her model of *Integral Learning* is

consistent with a constructivist model of learning; it is essentially an experiential model of learning, and it is a 'whole brain' model of learning. So why another name? My way of knowing about human learning was not fully captured by any of the other models alone. A synthesis of the ways of knowing each model represents comes closest to representing my own current understanding of learning. Learning which involves the integration of our experiences, our feelings, our reflections and our actions is integral to being human (p. 17).

The above description bears some resemblance to Rogers' (1969, 1983) and Kolb's (1984) theories of learning. Rogers' (1983:20) claims that 'significant learning combines the logical *and* the intuitive, the intellect *and* the feelings, the concept *and* the experience, the idea *and* the meaning'. This terminology is remarkably similar to Atkin's (1993) and Herrmann's (1989). Herrmann's theory of four styles of cognitive processing: left-brain cerebral, left-brain limbic, right-brain limbic, and right-brain cerebral correspond with Rogers' categories, though Rogers makes no mention of brain function. Kolb claimed that his Experiential Learning Model (1984:20) had its 'intellectual origins' in the work of Dewey, Lewin and Piaget, and that experiential learning theory is 'a holistic integrative perspective on learning that combines experience, perception, cognition, and behavior'. Kolb's terminology, does not correspond entirely with Atkin's, but her *Integral Learning* (1992) model relates closely to the principle that learning should involve all the processes described by Kolb, and she acknowledges this.

The third dimension of Atkin's Framework for Effective Teaching has been described by her as making explicit 'appropriate mental processes'. A search of the literature revealed one source which used similar terminology, in this case the terminology was 'appropriate mental schemata' (Gage & Berliner, 1988:294).

Gage & Berliner proposed that 'meaningfulness depends on engaging appropriate mental schemata', that is, a context or relevant existing schemata must exist for the learner, so that new learning can be effectively assimilated into existing knowledge, and 'cross-listed' with other schemata. A teacher, according to Gage & Berliner (1988), needs to either provide the appropriate schemata or help learners access their own appropriate schemata. These researchers appear to be using the term 'engaging appropriate schemata' as Ausubel, Novak & Hanesian (1978) described 'meaningful learning', and Gage & Berliner encourage the use of strategies to 'tap into already existing knowledge structures that the learner brings to the instructional situation [in order to] make the material more meaningful for the learner' (p. 295). Atkin appears to be using the term engaging appropriate mental processes' in a similar sense, advocating specific strategies to match a learning strategy with the learning task.

A related concept, addressed by Atkin (1992a, 1992b, 1993) is that of effective learners.

Effective learners

Effective learners, according to Atkin (1993:17) are those who 'have internalised what they have learned and can transfer their learning to new situations, [and] have generally engaged whole brain processing in the learning process'. These effective learners, Atkin claims, have used an integrated approach to learning, regardless of learning style. In other words, she claims that effective learners, consciously or unconsciously, have used a process which is similar to the approach which she describes as her *Integral Learning* model.

Two writers who address the idea of effective learners are Schmeck (1981) and Gagné (1985). Schmeck (1981) contends that effective learners are those who think deeply and elaboratively about what they are studying. To Schmeck, deep processing involves being mindful of the meaning and classification of ideas implicit in a symbol rather than paying attention to the symbol itself. Deep processing is enhanced by elaborative processing in which the learner deals with information in a way that 'enriches it and makes it more concrete and personally relevant' (p. 384). These two styles of processing information, according to Schmeck (1981) lead to more effective long term memory, even when the intention may not have been to remember. Schmeck (1981) states that deep

elaborative processors pay more attention to thinking than memorising; that they 'classify, compare, contrast, analyze, and synthesise information' and that they 'elaborate by thinking of personal examples, visually imagining personal illustrations, and restating information in their own words' (pp. 384-385). Schmeck's assertion regarding deep elaborative or effective learners bears some similarity to Atkin's (1993:18) claim that

when effective learners are exposed to new information presented in [logical, analytical, quantitative, fact based] mode, they ask *What is that like? What is an analogy/image/pattern that applies? What is an example of this? How does this relate to other examples/situations I've experienced?*

While Schmeck (1981) views effective learners in terms of their deep elaborative processing styles, for Gagné (1985:333), the elements of effective learning include

(1) strategies for selectively attending to the most informative aspects of an instructional stimulus, (2) strategies for effective encoding of new material so that it will be easily retrieved later on, (3) knowing the conditions under which a given strategy is effective, and (4) monitoring the effectiveness of one's strategies.

A comparison of Atkin's and Gagné's concepts of elements of effective learning leads to the following conclusions. First, Atkin makes no reference in her framework to selective attention patterns of effective learners. Second, she does address the issue of encoding new material for easy retrieval in the context of cognitive processes of memory. Strategies for enhancing long term memory and retrieval of information receive considerable attention in the *Teaching for Effective Learning* workshops. Third, Gagné (1985) claimed that knowing when to use a particular strategy will clearly assist a student in his or her learning, and one of the key factors in strategy selection is knowledge of 'what future use there is for the material being learned' (p. 340). The idea of knowledge of when to use a given strategy is central to Atkin's assertion of engaging appropriate mental processes, that is, a student will use an appropriate strategy to ensure effective learning. In this sense her meaning is similar to that of Gagné (1985). Finally, monitoring the effectiveness of one's strategies will, according Gagné (1985), set up the 'necessary conditions for generalization and discrimination' (p. 341). Monitoring learning is an underlying principle of Atkin's workshops, and is

implicit in the notion of metacognition, a key factor of her Framework for Effective Teaching.

Atkin's strategies to develop effective learners

Atkin (1993) argues that, to create effective learners, teachers need to ensure that their teaching involves all cognitive styles, as shown in Herrmann's Whole Brain Model (1989), and as reflected in her *Integral Learning* model (1992). To help teachers provide learning experiences which engage appropriate mental processes for skills and understanding, Atkin encourages the use of teaching strategies which engage the four ways of thinking as shown in Herrmann's metaphoric Whole Brain Model (1989). Examples of these strategies, which Atkin places in the realm of 'left brain, limbic and cerebral' modes, are: rules, formulae, debate, graphic representation (flow charts, timelines) and structured worksheets. Examples of 'right brain, limbic and cerebral' modes are discussion, drama role-play, guided visualisation, graphic representation (images) analogy and metaphor. These strategies are the practical approaches advocated by Atkin alongside the theoretical constructs of Herrmann's model.

It was not intended that all strategies listed by Atkin be reviewed against the literature, for as Atkin says, 'most of these strategies are not new' (1993:18). However two types of strategies did receive above average attention in the workshops and relevant literature was examined. These were visualisation strategies, and concept and mind-mapping strategies.

Novak & Gowin (1984) advocate the use of 'concept maps': diagrammatic devices which represent relationships between concepts, and present them in the form of propositions. Concept maps, according to Novak & Gowin (1984) enhance meaningful learning because they 'tap into a learner's cognitive structure and...externalise, for both the learner and the teacher to see, what the learner already knows' (p. 40).

Mind maps were developed in the 1970s by Buzan (1974) and popularised in texts for teachers such as Margulies (1992) and Dryden & Vos (1994). It is interesting to note that neither Atkin nor the other cited texts actually define mind maps. Each text describes mind maps in terms of what they can achieve,

such as 'creativity, understanding, communication, grasping the big picture, showing relationships of "trees" to the "forest", clarifying ideas' (Atkin, 1992b); 'teachers and learners can enhance their thinking skills and become more freely creative' (Margulies, 1992). Buzan (1974) explains mind mapping as a function which more closely represents the way the brain processes information naturally:

If the brain is to relate to information most efficiently the information must be structured in such a way as to 'slot in' as easily as possible. It follows that if the brain works primarily with key concepts in an interlinked and integrated manner, our notes and our word relations should in many instances be structured in this way rather than in traditional 'lines'. Rather than starting from the top and working down in sentences or lists, one should start from the centre with the main idea and branch out as dictated by the individual ideas and general form of the central theme (p. 93).

It is interesting to note that no texts relating to mind mapping cited any research studies of the process.

Visualisation, a process addressed on a number of occasions in Atkin's *Teaching for Effective Learning* workshop, was advocated as a means of enhancing such skills as spelling and mathematics. Visualisation has been shown as useful for retention of learning in special education (Reing, 1978), as a means of improving long term memory (Andreoff & Yarmey, 1976; Evans, 1982) and problem solving (Moses, 1982). Lowrie (1994), in a study of mathematical problem-solving in primary school children, found that 'competent problem solvers were inclined to solve complex problems in a visual manner...Weak problem-solvers tended to not use visual methods when solving difficult problems' (p. 8).

Metacognition

In her publications, Atkin does not explicitly mention the concept of metacognition, but it is an implied concept which underpins most of her Framework for Effective Teaching. Metacognition is addressed in the *Inservice course notes* (1992b) as one aspect of the psychological conditions for learning. A key concept of Atkin's work is that teachers should become aware of their own styles of thinking and reflection on the thinking process, and, in turn, develop the same awareness in their students.

Metacognition is a subject dealt with by a number of educational writers (Brown, 1980; Schmitt & Newby, 1986; Rowe, 1988). Flavell (cited in Brown, 1980:453) defined metacognition as

one's knowledge concerning one's own cognitive processes and products or anything related to them...Metacognition...(metamemory, metalearning, metaattention, metalanguage, or whatever)...refers, among other things, to the active monitoring and consequent regulation and orchestration of...processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective.

Since metacognition is such an important underlying concept of Atkin's work, it is somewhat surprising that she does not explicitly refer to the considerable body of research conducted in New Zealand and Australia, such as the work of Jackson, Reid & Croft (1980) and White & Baird (1991), aimed at understanding how metacognitive processes can enhance learning.

The process vs content continuum

The preceding review of the literature relating to teaching and learning, makes little reference to content in learning. Similarly, Atkin's Framework for Effective Teaching focusses on the *process* of teaching and learning. Some writers assert that the process of learning should not be isolated from subject matter. Perkins (1990) maintains that thinking skills should not be taught in isolation from subject knowledge, and Shulman (in Brandt, 1992:18) argued also that 'we need a literature that focuses on the intersection of content and pedagogy'.

Summary

A review of the literature relevant to the dimensions of Atkin's Framework for Effective Teaching indicates that Atkin has brought together a wide range of teaching and learning theories in the development of her Framework. Atkin's emphasis on the importance of relationships in learning, a conducive environment, good communication and an integrated approach to learning, can be found in the literature of humanistic psychology (for example Rogers, 1969,

1983). Her emphasis on such things as meaningful learning, memory, motivation, readiness to learn and ownership in learning, relate directly to aspects of the cognitive field of psychology (for example Ausubel, Novak & Hanesian 1978), while the assumptions underlying Atkin's model of *Integral Learning*, appear to include a range of theories, including theories of brain functioning (for example, Herrmann, 1989) Kolb's Experiential Learning Model (1984), and constructivism (Novak, 1990).

In Atkin's publications she uses some terms which are synonymous with those found in the literature on educational psychology, for example 'extrinsic', 'intrinsic', 'motivation' and 'experiential'. Other terms are used by Atkin with a different meaning, for example 'readiness to learn' and 'sense of achievement', and her use of 'psychological conditions of learning' is in a different sense from Gagné's (1977) 'conditions of learning'.

While she alludes to research, Atkin cites very little of it and presents it in a way that is global, rather than providing supporting evidence from specific research studies. Atkin claims that her model is more embedded in practice—that is, it is more derived from her work as a teacher and inservice facilitator than from any particular field of psychology.

In addressing the first research question, a detailed examination was undertaken of the conceptual structure of *Teaching for Effective Learning* workshops (Atkin's Framework for Effective Teaching); its theoretical underpinnings; Atkin as a presenter, and of the veracity and level of innovation of the Framework. The second and third research questions focused on the impact of Atkin's workshops on practice in classrooms (i.e., implementation).

The improvement of teaching and learning in schools is a multi-factored and multi-levelled process. It does not simply involve the dispensing of information from one to another, about what it means to be an effective teacher or effective learner. Rather, it involves a number of interrelated and complex factors, such as teachers' backgrounds, commitment, knowledge, motivation, competence, beliefs and values, along with external influences such as school cultures, finances and administrative environments. Student backgrounds, attitudes, skills and knowledge can also have a profound influence on educational change. The quality of professional development in the form of inservice programs and their presenters may also have an impact on what is learned and how new skills and knowledge are transferred to the classroom. Some of these broad issues which are pertinent to the professional development of teachers and the implementation of innovations, are addressed in this chapter. Literature reviewed encompassed teacher professional development and inservice education; teacher professional knowledge; the teacher as an adult learner; inservice facilitators; factors affecting implementation, and transfer of skills and knowledge acquired in inservice programs.

Teacher professional development

Part of the role of a professional is to undergo professional development throughout his or her career. Professional development in this sense is the 'process of growth in competence and maturity through which teachers add range, depth and quality to the performance of their professional tasks' (Costello, 1991:131). Professional development is, according to Collins (1988), an integral part of school improvement.

A great deal is known about the conditions which make continuing professional development (CPD) effective but, 'in practice the quality is inconsistent (Logan, 1994:6). He argues that one of the challenges for the profession is to identify and control the conditions that influence the quality of CPD. It is the responsibility of the profession to identify and control those factors which influence the quality of professional development. Three influential factors which Logan (1994) identified were the 'personal demands placed on teachers', the 'influence of tradition' and 'theoretical basis of CPD' (p. 6).

Personal demands placed on teachers influence the quality of CPD. In addition to the demands of day-to-day life in a classroom, schools 'are not places that deliberately and systematically promote adult learning' (Logan, 1994:7). As a result of an increased workload, the informal sharing of ideas in staff rooms is limited, denying what Logan views as the 'most significant, and for many the only, ongoing worthwhile CPD (p. 7). The quality of CPD is not addressed by professional associations which have traditionally kept at a distance from the professional development of its members, leaving universities, governments and employing authorities with the responsibility of developing and delivering the content and processes of inservice programs (Logan, 1994). The theoretical bases of professional development, according to Logan (1994) have developed from the common views which inform it, and as such, are 'weak' (p. 6), and 'until the profession builds strong theoretical bases for its continuing professional development, it will remain open to the fads, fancies, fixes, factions and fictions

that have tended to characterise its practice and thinking' (p. 7). One of the problems with the theoretical bases, Logan (1994) argued, is the commonly used approaches to professional development .

Approaches to professional development

Three major approaches to teacher development have been identified by Hargreaves & Fullan (1992:2) as 'knowledge and skill development'; 'self-understanding', and 'ecological change'. The 'overwhelmingly dominant' approach to teacher education, they claim, is knowledge and skill development, one which has become big business, and the 'major consumer of staff development budgets'. The acquisition position, according to Logan (1994) assumes that teachers will accept and implement knowledge disseminated by 'experts'; it has a top-down management structure; it tends to pay more attention to single issues of schooling and less attention to the problems of applying skills and in specific contexts.

The acquisition of skills and knowledge 'takes place primarily at a series of workshops, at a conference, or with the help of a long-term consultant' (Lieberman, 1995:591). These formats prevail, according to Lieberman (1995) despite the fact that new conceptions of practices that support teacher learning 'run counter to' these practices which stem from 'deeply held notions about staff development and inservice educations that have long influenced educators' and the public's views of teachers' (p. 591). This conventional view of professional development Lieberman (1995:591) described as 'a transferable package of knowledge to be distributed to teachers in bite-sized pieces'.

Hargreaves & Fullan (1992:3) view the advantages of the 'skills and knowledge development' approach as concerning the practical nature of the programs, in which teachers can acquire new skills and knowledge which are applicable to their classrooms. Where the programs are more than 'one-shot workshops' and follow-up support in classrooms is provided, teachers view the process favourably, and there is evidence of 'improved levels of use in the newly

acquired skills' (Hargreaves & Fullan, 1992:3). Administrators favour this approach because 'they are clearly focused, easily organized and packaged, and relatively self contained' (p. 3). However these authors maintain that professional development which focuses on skill and knowledge development has problems which stem from the frequent imposition of 'top-down' knowledge of an outside 'expert', which may fail to engage teachers and which could set up a potential resistance to change. They point out that a 'top-down', 'expert' approach pays little attention to human relationships, and relies too much on the 'supposedly incontrovertible findings of educational research in order to justify the teaching methods they promote' (p. 4). In other words, 'the "hard" research knowledge of experts is deemed superior to the "soft" practical wisdom of teachers' (p. 5). What is needed, they argue, is a 'return to practices of educational research and enquiry whose primary purpose is...to engage in critical dialogue with the existing and collective wisdom of practice' (p. 5).

The collective wisdom of professionals, as one starting point for professional development, is also proposed by Eraut (1987, 1994). In 1987 he pointed out that there could be four approaches to inservice education: the 'defect', 'growth', 'change' or 'problem-solving' approaches. Inservice education programs based on the assumption that teachers' skills and knowledge are obsolete or inadequate and need upgrading, is described as a 'defect' approach. In contrast, a 'growth' approach for individual teachers or schools, developed from an internal stimulus, assumes that teaching is a complex process and that improvement comes about as a result of a need for greater fulfillment, rather than a need to correct deficiencies. A growth orientation involves exploring new options and examining new perspectives. The 'change' approach is based on the premise that educational systems need periodic redirection, in line with other societal changes, while the 'problem-solving' approach is based on the assumption that problems will inevitably arise in the context of a complex and varying process such as teaching. Those best able to diagnose and treat problems are those closest to the problem—that is, the teachers familiar with the situation.

In 1987 Eraut reported the 'defect' or deficit approach to be the foundation of much professional development. Seven years later he claimed that much

professional development today suffers from too little emphasis being placed on improving the quality of existing professional performance. A persistent emphasis on new skills and knowledge, coming from outside, rather than new skills and knowledge extracted from personal experience, leads to less emphasis on the collective wisdom of professionals as they share experiences. Eraut (1994:13) asserted that

Instead of helping professionals to reformulate their theories of practice in the light of their semi-digested case experiences and under the stimulus of collegial sharing and challenging, CPE [continuing professional education] all too often provides yet another strand of separate, unintegrated and therefore minimally used, professional knowledge.

Similarly, Batten, Marland & Khamis (1993) point out that the defect or deficit model is the inappropriate basis of a number of professional development programs, and while they acknowledge the necessity of remedial action which comes from the deficit model of professional development, a surfeit of emphasis on deficiencies can lead to 'the undermining of teacher morale and consequent decline rather than improvement in teaching performance' (p. 70).

Teacher professional knowledge

What teachers need to know, what they do know, and how that knowledge is acquired, is the focus of much of the recent literature on the professional knowledge of teachers (Shulman, 1987; Eraut, 1994; Fenstermacher, 1994). Both professional development of teachers and pre-service teacher education are concerned with the gaining of an appropriate knowledge base for teachers. Shulman (1987) has identified seven categories of knowledge required for the practice of teaching, namely content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of educational ends, purposes, and values, as well as their philosophical and historical grounds.

Sources of these types of knowledge, according to Shulman (1987) are first, 'scholarship in content disciplines'; second, materials and structures of an educational institution, for example, curricula, testing material, 'explicit and implicit systems of rules and roles', or professional organisations; third, research into schooling, teaching and learning, and fourth, the 'wisdom of practice' of teachers (Shulman, 1987:8-12). The last of these sources of knowledge is sometimes referred to as 'teacher craft knowledge' (Leinhardt, 1990; Grimmer & MacKinnon, 1992; Fenstermacher, 1994).

Teacher craft knowledge

Grimmett & MacKinnon (1992) argue that, of the seven categories of knowledge identified by Shulman (1987), pedagogical content knowledge is 'epistemologically different from the other six categories posited' (p. 387). The others, according to Grimmer & MacKinnon, are 'sometimes discussed as though they contain a set of principles derived from research that *could* dictate practice' (p. 387). Pedagogical content knowledge, on the other hand, is derived from accumulated 'experience in the practice setting', and while it pertains to 'knowledge that can be taught in lecture halls', it is 'formed over time in the minds of teachers through reflection' (p. 387). Shulman's pedagogical content knowledge, is, Grimmer & MacKinnon argued, more akin to a 'craft' idea of teaching than a conception of teaching as an applied science. Further they suggest a combination of knowledge of the learner and general pedagogical knowledge, to create a category which they describe as 'pedagogical learner knowledge', or 'procedural ways in which teachers deal rigorously and supportively with learners' (p. 387). Pedagogical learner knowledge, together with pedagogical content knowledge, these authors suggest, most closely represents what others (for example, Leinhardt, 1990) describe as teacher craft knowledge. Craft knowledge, Grimmer & MacKinnon (1992) maintained,

represents teachers' judgment in apprehending the events of practice from their own perspectives as students of teaching and learning, much as a "glue" that brings all of the knowledge bases to bear on the act of teaching (p. 387).

Two points of view regarding educational enquiry and professional development, highlight the need to focus on the craft knowledge of teachers. First, Hargreaves & Fullan (1992) argued that we need to adopt an approach to educational research which primarily attends to the engaging of 'critical dialogue with the existing and collective wisdom of practice' (p. 5). Second, Eraut (1994) advocated an approach to professional development which promotes 'new knowledge arising from the distillation of personal experience' (p. 13) so that professionals may redevelop and refine their knowledge of practice, in the light of their experiences. Further, Shulman (1987:11) maintained that one of the most important tasks for educational researchers is to 'work with practitioners to develop codified representations of the practical pedagogical wisdom of able teachers', because he claimed, it is 'the least codified of all [sources of knowledge]' (p. 11).

However, while teachers need to accept that they can be effective generators of theories about teaching, and not just accept a role as consumers of university-generated knowledge about teachers and teaching, few practitioners are involved in codifying their knowledge about teaching. Most attempts to do this have been done by university-based researchers (Cochran-Smith & Lytle, 1990).

Batten, Marland & Khamis (1993) argued that, if the craft knowledge of teachers, and in particular, that of expert teachers, is revealed and codified, it 'may provide researchers with a clearer insight into the nature of effective teaching' (p. 3), which, in turn, could enhance both preservice and inservice professional development programs for teachers. Similarly, Berliner (1986) pointed out that studies of the way in which expert teachers think about their routine practices could help them articulate their knowledge. In doing so, experts would be more able to educate novice teachers.

The craft knowledge of teachers plays a significant role in the success or failure of the implementation of innovations, according to Brown & McIntyre (1989). These researchers claimed that the history of curriculum innovations 'shows an

Emphasis was placed on the researcher's interest in use and non-use of skills and knowledge learned in the workshops, and possible reasons for both use and non-use. Confidentiality was also assured. Topics addressed in the taped mid-year interviews were as follows:

- the teachers' perceptions of the *Teaching for Effective Learning* workshops and Atkin as a presenter;
- the teachers' understanding of Atkin's *Integral Learning* model after two workshops;
- transfer of skills and concepts, learned in the workshops, to their classroom practices.

Post-workshop interviews

Interviews began with a similar assurances that was used in previous interviews, regarding the researcher's intentions and issues of confidentiality. Taped post-workshop interviews, using the *general interview guide approach* (Patton, 1990) focused on the following issues:

- the teachers' understanding of Atkin's Framework for Effective Teaching in general, and her *Integral Learning* model in particular, after the final workshop;
- transfer of skills and concepts, learned in the workshops, to their classroom practices, and
- factors which helped or hindered implementation.

A sample of a pre-inservice, mid year and post-inservice interviews are shown in Appendix 5.

Pre/post-inservice observations

Observations of teachers in their classrooms were designed to serve as a means of validating data obtained in the interviews, relating to skills and knowledge learned in the workshops.

alarmingly modest level of successful pedagogical implementation in classrooms of what looked like “good ideas” for change’ (p. 3). The apparent reason for this poor record, Brown & McIntyre (1989) maintained, is a teacher’s perceptions of the impracticality of most innovations. In the view of these researchers, what a teacher perceives as practical may, in fact, be procedures which may depend ‘on the implicit skills and strategies which they have learned for achieving their purposes within the conditions in which they work’ (p. 4). Similarly, Clark & Peterson, (1986) pointed out that

if teachers’ implicit theory about learners or their mental image of effective teaching were contrary to that embodied in a new curriculum or an experimental teaching method, they would be unlikely to bring the innovation alive with great enthusiasm, thoroughness and persistence (p. 292).

Understanding how to successfully bring about change, therefore, may involve the necessity of understanding what a teacher values as practical and successful teaching procedures. ‘The emphasis would be on how **teachers** construe their teaching and not at all on the external evaluation of that teaching’ (Brown & McIntyre, 1989:4). Therefore, understanding a teacher’s craft knowledge may provide greater understanding of why a particular innovation may or may not be implemented in a classroom.

While there may be justifiable reasons for teachers being able to articulate their craft knowledge, the problem, Batten et al. (1993) point out, is how to ‘uncover knowledge which is a product of experience and reflection’ (p. 67). In recent times, attempts have been made to codify the craft or practical knowledge of teachers.

An early contribution to the research on the practical knowledge of teachers was a study undertaken by Elbaz (1983) of a teacher ‘Sarah’. In a series of five, informal open-ended interviews and observations, Elbaz attempted to gain an understanding of ‘Sarah’s attitudes to teaching and learning, and her conceptions of her subject matter...her values, commitments and career plans as a teacher’ (p.

4). The content of a teacher's practical knowledge, Elbaz found, is the 'knowledge of self and milieu', 'subject matter knowledge' and 'knowledge of curriculum and instruction'. In a similar qualitative study of two early childhood teachers, involving interviews and participant observation over the period of a year, Clandinin (1986) attempted to conceptualise practical knowledge of teachers 'as they can be seen to crystallize in the form of images' (p. 4).

Two studies, one in the United Kingdom (Brown & McIntyre, 1989) and another in Australia (Batten, Marland & Khamis, 1993) used interview and observation methods in attempts to make explicit some aspects of teacher craft knowledge. Brown & McIntyre (1989) undertook their study of craft knowledge of teachers because, they asserted,

there is an urgent need to know more about what it is that teachers do well in classrooms, how they construe and evaluate their own teaching, how they make judgements and why they choose to act in particular ways in specific circumstances to achieve their successes (p. 1).

Brown & McIntyre's (1989) four stage study was designed to 'explore that part of their professional knowledge which teachers acquire primarily through their practical experience in the classroom rather than their formal training, which guides their day-to-day actions in classrooms' (p. 5). Working on the assumption that only teachers and their students can have a full understanding of what takes place in a classroom, Brown & McIntyre (1989) interviewed twelve to fourteen year-old students and their teachers and undertook observations of lessons, in a Scottish comprehensive secondary school and four of its 'feeder' primary schools. Because their aim was to comprehend teaching solely from the viewpoint of the teachers, 'to discover and understand the implicit theories which teachers have and use to guide their own teaching (p. 9), these researchers maintained that they were at pains to avoid the use of any preconceptions about this implicit knowledge; to avoid having assumptions about goals which would drive teacher actions, and not to employ theoretical models of teaching against which they could interpret 'good' teaching. As a result of their study, Brown & McIntyre (1989:74) identified common goals for teachers as being:

- a good and easy relationship between the teacher and pupils in the classroom
- pupils to be understanding what the teacher is asking them to do
- pupils who (for whatever reason) are reluctant to work, to be actually working
- all pupils to be applying themselves well to the work
- pupils to be thinking about, and understanding, what they are doing, rather than just doing what they are told.

In the Australian study, Batten, Marland & Khamis (1993) extended the work of Brown & McIntyre (1989), using a similar methodology to the British study. Like the British study, Batten et al. (1993) focused on the teachers' perspectives rather than from the researchers' viewpoint, or from theory emanating from educational research literature. The primary aim of the Batten et al. (1993) study was 'to enable teachers to articulate, develop and share their professional craft knowledge' (p. 8).

The UK (Brown & McIntyre, 1989) study illuminated teacher craft knowledge in terms of common goals for teachers and the Australian (Batten *et al.*, 1993) in terms of common attributes of successful teaching. There are similarities in the findings of the two studies: both refer to relationships and student motivation, while the UK study found communication between teacher and students, students applying themselves, and students taking responsibility for learning, as important. The Australian study refers to classroom management skills, awareness to student needs and creating a positive learning environment. Neither study, however, makes reference to teacher awareness of the ways in which their students learn, or how they plan learning experiences to cater for, and develop, different learning styles.

In terms of Atkin's Framework for Effective Teaching, analysed in Chapter 2 of this thesis, it could be argued that the UK and Australian studies identified characteristics relating to the first two dimensions of Atkin's Framework, namely *relationships* between students and teachers, and the *psychological conditions*

needed for effective learning. However the studies did not address the third dimension, the *appropriate mental processes* of learning.

While there appear to be sound reasons for articulating and codifying the craft knowledge of teachers, Leinhardt (1990) saw problems with such an identification. She claimed that while it may be 'deep, sensitive, location-specific knowledge of teaching' it also includes 'fragmentary, superstitious, and often inaccurate opinions' (p. 18). There is a problem in deciding what is appropriate craft knowledge and how it is explicated. Simply asking the teacher, Leinhardt asserted, creates a problem of determining 'whether a teacher is in fact reporting the critical, crucial, analytic pieces of performance and knowledge base' (p. 20). One possible solution, Leinhardt suggested, is the use of patterns and techniques of cognitive psychology to help 'delineate how information is processed, how memory is organized, how demands are handled, how planning systems are constructed, and how schemas are structured'. If used in conjunction with 'traditional tools of anthropology' a teacher need only exhibit specific skills for them to be analysed, along with 'careful dialogue' with the teacher (p. 19). In finding the source of craft knowledge, a key issue, according to Leinhardt, is to 'winnow kernels of knowledge from the chaff of superstition' (p. 23).

While efforts to capture and codify craft knowledge continue, teachers still attend inservice workshops, the approaches of which are still largely of 'knowledge and skill development', rather than attention to 'self-understanding' or 'ecological change' (Hargreaves & Fullan, 1992). While the outcome of these programs, in terms of implementation, may depend on the existing craft knowledge of teachers, the success of the programs themselves may depend on a number of conditions, not the least of which is the attention paid to teachers as adult learners.

Teachers as adult learners

Teachers bring to professional development a wide range of teaching experiences through their years of service, the classes and subjects they teach and previous

participation in inservice programs. They also have 'differing personalities, decision-making styles, verbal intelligence, pedagogical beliefs and professional ambitions' which impact on their professional development (Conners, 1991:60). Despite these differences Conners asserts, 'major generalizations about adults as learners and principles of effective practice' (p. 61) can be found in the literature relevant to teachers as learners. If teacher professional development programs are to have 'maximum impact' they should be planned with due attention given to individual teachers as adult learners (Conners, 1991). Wood & Thompson (1980), Moore (1988) Knowles (1990) and Conners (1991), for example, all maintain that adult learners need to have their prior experiences taken into consideration in the learning situations, and that the individual nature of each learner's experiences requires an individual approach on the part of the facilitator. Adults learn best, according to these authors, when they know the purpose of the learning and when they perceive the goals of learning as relevant and important; when they have a measure of control over the content, provided the people and resources they require are accessible, and when there is a climate of trust and respect for participants from the facilitator and between participants.

Knowing the purpose of any learning is important to adult learners (Wood & Thompson, 1980). Successful inservice programs allow participants control over the 'what' and 'how' of their learning, and should be focused on work-related practices. Knowles (1990) adds that adult learners need to know the 'why', and suggests that readiness to learn exists in adults as soon as they perceive the worth of a learning task, particularly when the learning is placed in a context of real-life situations. Because of that readiness to learn, adults tend to be motivated to do a job well and become deeply involved in learning. However, this motivation, Knowles (1990) points out, may be blocked by memories of negative learning experiences in school, therefore conditions should encourage and nurture any motivation which already exists in the adult learner. Adult learning is 'ego-involved' (Wood & Thompson, 1980:376), therefore an emotional climate in which people are encouraging and nurturing is significant in adult learning. Learning should take place in social situations where external criticism

is avoided and where respect, trust and concern for the learner is exhibited. Under these conditions adult learning is enhanced (Wood & Thompson, 1980).

Self-direction for adult learners is seen as significant by Moore (1988), and Knowles (1990). Moore (1988) claimed that participants should be involved in the decision-making, design and implementation of an inservice program, and help structure the learning environment and process which should be collaborative and participatory. Programs should encourage decision-making, particularly in regard to action as a result of learning which takes place, and problem posing and problem solving should be an integral part of inservice programs.

Joughin (1992) challenges the assumptions that (a) teachers are self-directed learners and that (b) they need to learn in a collaborative, supportive environment, because, he claimed, the cognitive learning style of teachers may dictate their capacity for self-direction and need for support. Joughin (1992) used Witkin's (1977) concept of field dependence/independence, to highlight differences in learning styles of teachers and described both types of learner in terms of professional development implications.

Those adults who tend towards field-independence will have a relatively well-developed capacity for some aspects of self-directed learning—their analytical ability will enable them to conceptualize the various components of a learning task, to put order into disorganized elements of a learning field, and to be aware of their own needs and strengths as they progress towards meeting goals. On the other hand, those adults who tend towards field-dependence will be relatively lacking in these skills. While they may compensate to some extent by the benefits of a more 'with people' orientation and consequently may perform better in learning tasks that are dependent on relating well to others, they may suffer in all learning situations that require a high level of analytic thought, that are relatively unstructured, or that call for self-reflection (p. 13).

Therefore adult learners in professional development differ in their need for 'structure'; in their 'analytic ability'; in their response to 'affective considerations', and in their response to 'authority/responsibility' (Joughin,

1992:13), so it is evident that participants' acceptance of an inservice program, or the learning which occurs, will vary, and inevitably result in different levels of implementation.

Another common theme in the literature on adult learning is the importance of experiential learning, though Moore (1988) and Wood & Thompson (1980) use the term in differing ways. Moore (1988) takes a broad view of experiential learning as 'learning that occurs by or through experience' (p. 3) and quotes Keeton and Tate's (1978:2) statement that 'experiential learning refers to learning in which the learner is directly in touch with the realities being studied'. Wood & Thompson (1980) define it as a step-by-step process, and take their meaning from John Dewey, who they claim was the originator of the concept.

Experiential learning— learning by doing—includes: (a) an initial limited orientation followed by participation activities in a real setting to experience and implement what is to be learned—the skill, concept, strategy; (b) an examination and analysis of the experience in which learners identify the effects of their actions; (c) an opportunity to generalize and summarize when the learners develop their own principles and identify applications of those principles; and (d) an opportunity to return to try out their principles in the work setting and develop confidence in using what is learned (Wood & Thompson, 1980:377).

Experiential learning, according to Wood & Thompson (1980:376), 'accommodates the special learning styles of adults, and it maximizes the transfer of learning from training setting to application on the job'. Moore (1988:4) maintains that use of experiential learning methods can 'help foster critical, reflective thinking'. Since Schön (1983:299) suggested that a reflective practitioner may be more inclined to give up his or her existing competence in order to practice new skills and knowledge, then experiential learning, which Moore (1988) claimed will facilitate reflective thinking, may be an appropriate process for inservice programs.

Lieberman (1995) compared adult and student learning, arguing that the way in which teachers learn is probably more akin to student learning processes than

has been recognised. Learning theories, therefore, which advocate active involvement, reflecting on, and becoming articulate about what is learned, are appropriate for teachers. Lieberman (1995) suggested that the traditional perception of professional development as a 'transferable package of knowledge to be distributed to teachers in bite-sized pieces' is a limited view of teachers' learning, and one which needs amending. What is required, she argued, is a new approach which 'yokes student-centred pedagogy' because 'a wide array of learning opportunities that engage students in experiencing, creating, and solving real problems, using their own experiences, and working with others—is for some reason denied to teachers when they are learners' (p. 591).

The literature on teachers as adult learners suggests, on one hand, that teachers participating in professional development will bring to any inservice program a range of skills, knowledge, experience and levels of motivation. On the other hand the literature indicates that there will be common needs for participants, such as recognition of their individual differences, their need to know the relevance and purpose of any program, and their preference for working in a climate of trust, respect and concern for the learner. It would appear then, that an effective inservice facilitator must balance the sometimes competing requirements of participants.

Inservice facilitators

Not only must the inservice facilitator cater for a range of participant requirements, the literature indicates that they must have particular characteristics, have a balanced presentation style, be an expert in both their content matter and the change process itself.

Tough (1971) and Rogers (1983) both stressed the importance of personal qualities of facilitators. Tough (1971) identified four qualities of successful facilitators of learning, namely: that they are warm and caring with an acceptance of the learner; they acknowledge and respect the learner's capacity to plan his or her own learning; they view themselves as equals in the learning process and

they are flexible, open to new experiences and learn from the facilitating experiences. Rogers (1983) affirmed the first quality described by Tough, when he listed characteristics which he viewed as essential in an effective facilitator, that is, realness or genuineness; prizing, acceptance and trust, and empathetic understanding.

Closely allied to personal qualities of leaders is their leadership style, which also plays a part in the effectiveness of inservice programs. Two main leadership style, facilitative and didactic, are described by Nelson-Jones (1991:21). Effective leaders, he maintains, have high levels of both didactic and facilitative skill, and use them flexibly, to achieve a given purpose according to the specific needs of a group or the needs at any one time. The high-level didactic leader, he claimed, makes decisions in advance regarding the process by which knowledge is to be disseminated, and participants are not invited to share goals and methods. Any experiential learning planned by the didactic style of leader would involve coaching, rehearsal and feedback. The predominantly facilitative leader's role, on the other hand, is assistant or helper in the learning process. The latter type of leader, according to Nelson-Jones, is concerned with group relationships, and shares responsibility with the participants for the direction of the group, in terms of relationships and the learning process. Additionally, Nelson-Jones (1991) points out that leadership credibility depends on three characteristics: knowledge of subject matter, good communication skills and good planning and preparation. In terms of subject matter knowledge, Nelson-Jones (1991) stresses the importance of theoretical knowledge, research knowledge and experiential knowledge. Having good subject matter knowledge allows freedom to concentrate on presentation methods, and is 'more likely to be a source of influence for participants if they perceive [the leader] as having expertise' (p. 59).

However, while a warm and caring facilitator who addresses the needs of the adult learner may make an inservice program more acceptable to its participants, it will not necessarily lead to the changes which may be expected from teachers' attendance at an inservice program. As Ingvarson & MacKenzie (1988) pointed out in their study of factors affecting the impact of inservice courses for teachers,

even when teachers valued a program highly, 'that in itself was no guarantee that change would be or could be implemented back in schools' (p. 153). The role of the facilitators as an integral part of the change process itself, is increasingly being addressed by writers on educational change (for example, Fullan, 1991).

With devolution of power of decision-making to schools from central authorities in Australia, UK and the USA, and as system-level consultants are being phased out, schools are increasingly employing private consultants as inservice facilitators. This, according to Fullan (1991), has led to a focus on the role of consultant, and in particular, that role in relation to the facilitation of change. When choosing an external consultant, Fullan (1991) stressed that it is equally important to take into consideration their competence in providing high-quality programs, and that they, or others, will follow through to provide the necessary support for implementation. Fullan (1991) argues that

Effective implementation involves the development of individual and organizational meaning vis-a-vis a particular change. Consultants, if they are to be effective, must facilitate the development of that meaning as they interact with school and district personnel (p. 224).

The selection of an inservice facilitator should, Fullan (1991) maintained, include interpersonal skills, a broad-based knowledge of education, content expertise, experience of teaching adults, and a 'personal style that emphasizes both initiative-taking and energy' (p. 225). Further, the facilitator requires 'skills in both the content of changes being considered and in the process of change' (p. 340). The problem, as Fullan sees it, is that there are 'a great and increasing variety of change agents—curriculum consultants, staff developers, mentors, coaches, etc.—who themselves need pre-and inservice professional development on change leadership' (Fullan, 1991:341).

Inservice programs and their presenters will vary in quality. Presenters may be charismatic and outstanding in their ability to inspire and motivate participants to change and develop new ideas and teaching process. Programs may be relevant and rewarding to teachers attending. However the process of

implementation of an innovation involves more than successful programs and presenters. It involves yet another set of influences which will impinge on the success or failure of that process.

The implementation process: Success and failure

As previously stated, successful implementation of new ideas and practices learned in inservice programs, requires that the phenomena of change itself, and how people experience it, be understood (Miles, 1987; Fullan, 1991). Those implementing an innovation may experience a sense of loss or lack of competence (Marris, 1975) while developing new skills, and support for those undergoing change is an important component of success (Joyce & Showers, 1983; Miles, 1987; Fullan, 1993). The process of implementation frequently involves the transfer of new skills and knowledge from an inservice program to the classroom, and unless the phenomenon of transfer is addressed as a priority, it is unlikely that effective implementation will occur (Joyce & Showers, 1983). While not explicitly advocating a support structure for those involved in change, Hall & Hord (1987) express a similar view when they claim that, for implementation to succeed, the implementation process itself must receive as much attention as the innovation. Implementation, according to these authors, depends on 'internal factors: organizational climate, motivation of participants, implementation strategies used by the local leaders, and scope of the change' (p. 39).

While the assumption may be that inservice programs will lead to improved classroom practice, in reality 'the paths to educational improvement are strewn with examples of behavior that no one knew how to deliver' (Miles, 1987:4). Fullan (1991), in reviewing a ten year period of inservice education found seven causes of failure in programs: 'one-shot' workshops which are prevalent but ineffective; planning of content being done by people who are not necessarily the focus of the inservice; lack of follow-up support for those attempting to implement an innovation learned in inservice programs; the infrequent nature of follow-up evaluations; the inservice does not address the needs of the

participants; a diverse range of schools from which those attending may come and the lack of recognition of the varying responses of schools when inservice participants return to them, and finally, 'a profound lack of any conceptual basis in the planning and implementing of in-service programs that would ensure their effectiveness' (p. 316).

The ability to manage change is an essential skill in post-modern society (Fullan, 1993). Individuals have no choice about change, but they do have a choice about their response to it. Focussing on the individual in the change process is therefore 'not a substitute for system change, *it is the most effective strategy for accomplishing it*' (p. 135). For successful implementation to occur, Fullan (1993) argues, we need to be aware of both our 'inner learning (our intrapersonal sense-making) and outer learning (relating and collaborating with others)' (p. 138). Inner learning, he points out, is important because it is within ourselves that the change process begins; and that while some resist and fail to cope with change, others meet the challenge with ease.

People's response to change was one aspect of an investigation by Miles (1987) into 'what makes for successful implementation of improvement programs in urban high schools'. One finding in Miles' (1987) study was that the 'human issues' were far more significant than the content of the program, though he does not define 'human issues'. Miles (1987) found that attitudes such as 'resistance', 'scepticism' and 'lack of ownership' were significantly more problematic than the process problems such as 'uncoordinated efforts', 'delays' and 'weak planning', and resource problems such as 'lack of time', 'funds' and people and overload. Teachers, principals and organisations cope with the stress and problems of change in a variety of ways, categorised by Miles (1987) as ranging from 'shallow' to 'deep' (p. 17). At one end of the continuum 'shallow' coping results in avoidance or deferment; at the other end, the building of personal and system capacity involves systematic staff training and development, the provision of additional staff, sharing, planning, monitoring and interacting.

Other facets of the personal side of change are seen in four studies which show the influence of teachers' personal attitudes towards the implementation of innovations and their motivation to change (Sharan & Hertz-Lazarowitz, 1982; Guskey, 1986; Smylie, 1988; Conners, 1991).

Teachers' perceptions of their capacity to improve the learning of their students has a direct influence on their willingness to change their behaviour and adopt new practices (Smylie, 1988; Churchill, Williamson & Grady, 1995). Past failures to improve classroom effectiveness may result in teachers being less likely to implement new ideas. Therefore, Smylie argued, 'teacher change seems rooted in individual perceptions of self as influenced by experiences within classrooms and with teaching colleagues' (p. 24). Similarly, Guskey (1986) pointed out that teachers are attracted to inservice programs which provide activities that 'can potentially expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students' (p. 6). Teachers prefer 'specific, concrete, and practical ideas that directly relate to the day-to-day operations of their classrooms' (p. 6). Therefore, Guskey (1986) argued, an effective inservice program will provide processes which will 'directly enhance desired learning outcomes in students' (p. 6). This finding is supported by Sharan & Hertz-Lazarowitz (1982) who suggested a very pragmatic reason for successful implementation. A study by these researchers indicated that an explanation for the successful implementation of some programs was that these innovations provide practical assistance to teachers in dealing with children. The focus of their study was teachers' behaviours, attitudes towards, and perceptions of, their implementation of an innovation. The conclusion reached by these researchers was that, regardless of the personality of the teacher, some adopted the innovation because it provided 'genuinely effective tools for coping with the main object of their attentions and concern, namely, daily classroom teaching' (p. 199). Teacher implementation of an innovation which is of practical use is not surprising at a time when their lives are filled with 'meeting incessant demands from pupils, administration, colleagues and parents both inside and outside of the classroom' (Logan, 1994:7).

An Australian study (Conners, 1991) which investigated teachers' perspectives of professional development, supported Guskey's (1986), and Sharan & Hertz-Lazarowitz's (1982) findings that teachers prefer inservice programs which assist them with their day-to-day classroom activities. Conners' (1991) study indicates that teachers prefer content which can be readily adapted to their classrooms. In Conners' (1991) study, male and female primary and secondary teachers all ranked as their prime objective for attending professional development activities: 'To become acquainted with the latest developments in my field of teaching'. Rated second (of 15 objectives) for primary teachers and third for secondary teachers was: 'To obtain curriculum content that I can *readily adapt* into my present teaching practices'. The objective ranked third for female primary teachers and fourth for male primary and all secondary teachers was: 'To obtain teaching methodology that I can *readily adapt* into my present teaching practices'. Ranked fifth and sixth was the objective: 'To obtain confirmation that my present teaching practices are appropriate', and ranked between nine and twelve for all teachers were the objectives: 'To obtain curriculum content that I can use to make a *major change* in my teaching practices' and 'To obtain teaching methodology that I can use to make a *major change* in my teaching practices'.

The implications of the preceding studies (Sharan & Hertz-Lazarowitz, 1982; Smylie, 1986; Guskey, 1986; Conners, 1991) for developers of inservice programs are that if change is to occur, two factors need to be present. First, that the skills and knowledge taught in the program are seen by teachers to be of practical value and can be readily adapted to classroom use, and second, that it will be seen to improve learning outcomes for students. The significance of the practical value of an inservice program supports one aspect of the literature relating to teachers as adults learners, namely that adults learn best when they perceive the goals of learning as relevant and important. A further explanation for why some teachers adopt change while others resist it, relates to whether or not teachers are voluntary participants in inservice programs (Guskey, 1988). The findings of Guskey's (1988) study, which investigated the implementation studies of 'mastery learning instructional strategies', has relevance to the current investigation of the impact of an inservice program which focused on Atkin's

(1992) *Teaching for Effective Learning* workshops. In Guskey's (1988) study of 114 elementary and secondary teachers, he found that teachers who shared characteristics which appear to be those of effective teachers, those 'who express a high level of personal efficacy, who like teaching, and who feel confident about their teaching abilities' (p. 67), also appeared to be the most receptive to implementation of new instructional practices. Possible explanations, Guskey (1988) suggested, could be the nature of the innovation in the study, namely, strategies for mastery learning. Highly effective teachers may have been already employing these strategies, while less effective teachers were not. Second, effective teachers may be more open and receptive to change than those that are less effective. Guskey (1988:68) claims that this research indicates that

when participation in new programs is strictly voluntary, the teachers who choose to become involved, at least initially, are likely to be those who are already very talented and highly effective instructors. In terms of program evaluation, this means that evaluators must be very careful to separate program effects from what might be teacher effects. Often program evaluations involve comparisons between the results attained by teachers implementing the new program and those attained by other teachers in the same building or school district not implementing the program at the present time. However, if those implementing the program are volunteers, it is likely their results would be better than those attained by their nonvolunteer colleagues anyway, even without the program.

If less effective teachers are to change, strong leadership and collegial support will be required (Guskey, 1988).

While the preceding studies indicate many factors which influence implementation of an innovation, none of them addresses the issue of the sense of discomfort or perceived loss of competence which may attend attempts to implement new skills and ideas.

Discomfort and change in implementation

The literature on educational change and implementation indicates that a degree of discomfort may be an inevitable factor for those involved in significant change

(Marris, 1975; Galton & Williamson, 1992; Fullan, 1982, 1993). Marris (1975:7) suggested that change will always be difficult and involve a sense of deprivation, doubt and disquiet. 'The will to adapt to change has to overcome an impulse to restore the past'. Discomfort, Marris (1975) claimed, is quite natural, and when fully understood and accepted, change is more likely to eventuate. Discomfort may stem from the contiguous nature of conflict and change, which can occur when an innovation is in opposition to a teacher's current values, a situation which few school leaders fully understand (Galton & Williamson, 1992). Similarly, Hargreaves(1994) pointed out that teachers who attempt to make changes in isolation may feel 'vulnerable and exposed; open to comparison and criticism by teachers and students alike' (p. 225), and that initial failure is likely to lead to a retreat from implementation of an innovation.

Discomfort is a *fait accompli* for significant change according to Joyce (1984). It is a precursor to growth, and productive management of the discomfort is required. In order to grow and change the learner must stretch beyond the confines of comfort, and deal with what he refers to as 'dynamic disequilibrium' (p. 26). The discomfort, according to Joyce & Showers (1983) comes from the greater effort involved, a sense of awkwardness in doing the unfamiliar, having to adapt familiar and comfortable strategies to accommodate the new, from students having to adapt to the change by learning new skills, and lack of confidence from the necessity of taking risks. This discomfort may take the enjoyment out of teaching and result in the eschewal of the new behaviour and reversion to comfortable and familiar ways of operating. Joyce & Showers (1983) argued that 'the more important the skill, the more powerful it is, the greater the discomfort will be because it disrupts more behaviour than a trivial skill' (p. 9). The teacher who most needs to practise new skills, they claimed, will be the one most likely to avoid discomfort.

In 1982 Fullan claimed that 'good change is hard work' (p. 63) and must be accepted for a time while lack of assurance is faced, and until the new ways of knowing and practising are an integral part of a teacher's professional existence. Over a decade later Fullan's (1993:26) view had not changed, maintaining that

the absence of problems with implementation of new skills and ideas is an indication that not much is being attempted. Superficial change is indicated when initial change efforts are characterised by few problems. However, Fullan (1993) maintained that it is only through the facing of problems which accompany change that it is possible to learn effective responses to complex situations, and experience the satisfaction and sense of fulfilment which comes from such success; and while important learning experiences may be accompanied by stress, it is that stress which provides an understanding of what needs to change. Therefore the essential ingredients for new learning are suspending belief, taking risks, and being willing to explore the unknown.

If such risk-taking is to be accomplished and discomfort is an inevitable companion to this process, then it is not surprising that many writers on change stress the importance of assistance for those making changes, on either an individual basis or from an entire school culture (Showers, 1983; Little, 1989; Fullan, 1982, 1993; Williamson & Cowley, 1995). Support for the transfer of skills from inservice programs to classroom practice is often in the form of 'coaching' (Joyce & Showers, 1983, 1988), 'mentoring' (Little, 1989), collaborative teaching (Baker & Shortland-Jones, 1991), or 'consultation' (Hord, 1987), all of which describe support processes.

Coaching serves four purposes according to Joyce & Showers (1983). It provides supportive social relationships, feedback on appropriate use of an innovation, assistance with the development of executive control and help with the adaptation of the innovation to particular students. A study by Showers (1983), which examined problems involved in the transfer of new instructional skills to classroom settings, indicated that coaching facilitated the transfer of the new skills in instructional practices into the classroom setting. Results, according to Showers (1983), revealed that

despite the inclusion of theory, demonstration, practice, and feedback, the results of this study strongly support the contention that without coaching of teachers as they attempt to integrate new teaching models into their instructional repertoires, transfer of training will not occur for most

teachers. Coached subjects in our study were quite candid in admitting that without coaching they would have discontinued use of the new strategies (p. 28).

Other researchers (Sparkes & Bruder, 1987; Galbo, 1989; Wideen, 1992) have conducted studies into the efficacy of coaching and they support Joyce & Showers' assertion that coaching is effective. Sparks & Bruder (1987:54) examined a peer coaching program in two elementary schools and attempted to ascertain whether peer coaching could 'improve collegiality, encourage experimentation and enhance teaching effectiveness'. Sparks & Bruder (1987) found that when a level of comfort with peer coaching was reached, teachers in both schools found it useful in 'improving collegiality, experimentation, and student learning' (p. 57). Wideen (1992) argued that because the isolation of many classrooms mitigates against good change, and because the adoption of a new skill may cause some disruption to normal practice, there needs to be 'shelter conditions' (p. 141) for risks to be taken. Wideen (1992) asserted that a group allows support and encouragement to help overcome initial anxiety and peer coaching serves to counteract the problem of making change in isolation. Similarly, Galbo (1989) claimed that peer coaching programs increased the teachers' ability to analyse their own practices and made it possible to transfer those skills to a variety of situations, and brought to a conscious level the competencies that the teachers had.

There is a weight of evidence supporting collaboration and collegiality as a means of improving professional development and growth, and as a means of ensuring implementation of innovations, both from within the school and from outside. Ingvarson & MacKenzie (1988) have shown, in a study of the impact of inservice courses for teachers, that

returns from investments in inservice education by school systems will be limited if the need for such support and assistance is not anticipated; that is, if planning for policy implementation goes no further than the provision of inservice courses alone, without the orchestration of follow-up support, both from within the school and from the external sources (p. 139).

Leadership which provides that support can come from a 'multiple of sources simultaneously' (Fullan, Bennett & Rolheiser-Bennett, 1990:17), and should not necessarily be the sole responsibility of a principal. Support can come from senior teachers, district personnel, consultants, universities or parents. Nor, according to these researchers, should there be an expectation that change can be sustained by individuals in isolation. For substantial, long-term change to occur, the focus, according to Fullan et al. (1990) needs to be on the systematic linking of classroom improvement, teacher development and school improvement.

Notwithstanding Fullan et al's. (1990) assertion that change should be at a system level rather than as single innovations to be implemented by individual teachers, the fact remains that many teachers are still attending inservice programs and receiving skills and knowledge in 'bit-sized pieces' (Lieberman, 1995). While this approach to teacher professional development continues, attention needs to be paid to the way in which learning is transferred to classrooms, in order that maximum benefit can be gained from the cost of the inservice programs.

Transfer of learning

The issue of 'transfer', or the critical link between learning new skills and knowledge in professional development programs, and the implementation of them in the classroom, is addressed in the literature on change (Hunter, 1971; Cormier & Hagman, 1987; Joyce & Showers, 1988, 1983). Hunter (1971:2) defines transfer as the ability 'to learn in one situation and then use that learning, possibly in modified or generalized form in other situations where it is appropriate'. Cormier & Hagman (1987:1) contend that transfer of learning occurs when 'prior-learned knowledge and skills affect the way in which new knowledges and skills are learned and performed'.

Psychologists, according to Klausmeier & Davis (1969), are interested in the 'precise variables which influence transfer of learning' (p. 1483), because schools and training personnel require training programs which 'maximize positive transfer'. Two types of transfer are identified by these researchers, namely *lateral*

and *vertical* transfer. *Lateral* or *horizontal* transfer, 'may be a generalizing from one task that facilitates performance on another task of about the same level of complexity' (p. 1483). Another influence, *vertical* transfer occurs when 'knowledge and abilities acquired in performing one task facilitate the learning of higher-order tasks of the same broad class' (p. 1483).

Joyce & Showers (1983) also referred to transfer of learning in terms of *horizontal* transfer and *vertical* transfer. For Joyce & Showers, *horizontal* transfer indicated that a skill is taken directly from the training situation to the place in which it will be used, and *vertical* transfer requires adaptation and refinement before any new application of the skill can be obtained. *Vertical* transfer usually occurs when there is disparity between the training context and the place in which the skill is to be used; when the new skill is different from the normal practice of the user, or if new understanding is required before the skill can be applied. In the field of teaching, most learning situations require vertical transfer since skills are learned in professional development programs amongst other teachers, whereas application of those skills will generally be in particular classrooms. Using new skills and knowledge in a context different from the learning situation, and with different participants (students) requires additional learning which has to take place 'in the work setting' (p. 6). The amount of learning, adjustment and consequent discomfort involved in the transfer of learning will depend on how closely the new behaviour fits with existing practices, that is, the more congruent, the less adjustment is needed (Joyce & Showers, 1983).

A similar notion is expounded by Perkins (1986), though he uses the terms 'low road transfer' and 'high road transfer'. Low road transfer

depends on the automatic triggering of well-practised knowledge or know-how by stimulus characteristics in a new context...It happens automatically, given sufficient practise, but usually tends not to reach very far because it depends on common characteristics of the superficial stimulus (p. 226).

For low road transfer to be effective, varied practice is required that allows application of new knowledge in a variety of contexts, so that the learner may recognise stimulus attributes for future use. High road transfer

calls for mindful generalizations of knowledge from one context and deliberate application in another... High road transfer tends to not occur spontaneously because it requires directed mental effort: One has to search out the connections (p. 227)

'High road', or 'vertical' transfer requires additional learning in the work context and should be aimed at developing what Joyce & Showers (1983; 1988) described as 'executive control.' This is required when the use of new skills need judgement, rather than simply involving standard operating procedures. Teachers would rarely use standard operating procedures, therefore the transfer of skills from the learning environment to the work place is at the discretion and judgement of each teacher. To develop executive control, Joyce & Showers (1983:8) argued, the teacher uses that judgement in

understanding the purpose and rationale of the skill and knowing how to adapt it to students, apply it to subject matter, modify or create instructional materials attendant to its use, organize students to use it, and blend it with other instructional approaches to develop a smooth and powerful whole.

Executive control involves more than just favourable feelings towards the new skills and knowledge, or an inclination to apply what had been learned; it also necessitates conceptual thinking about the innovation, and the 'hows' and 'whys' of the new practice (Joyce & Showers, 1983). In a study of coaching, Showers (1983) investigated, among other issues, the relationship between teachers' conceptual levels, that is their thinking and behaviour which range between concrete/rigid and abstract/flexible, and their ability to transfer skills learned in an inservice program. The study indicated that

teachers otherwise positive toward the content and process of their training and willing to practice the new teaching models in their classrooms, but who could not think conceptually about what they taught, and how and why, were apparently unable to use the new models

successfully during the teaching of the experimental unit used as a transfer task for all teachers (Joyce & Showers, 1983:8).

To facilitate the transfer of skills and the development of executive control, Joyce & Showers (1983) advocated the adoption of specific strategies, which include anticipating any problems with transfer, ensuring that high levels of skill are developed in the training process, making 'executive control' an integral part of the training; allowing for immediate practice in the context in which the skill is to be used, providing support from peers when vertical transfer is necessary, and a metacognitive attitude of learning how to learn (p. 15). Unless the problems of transfer are recognised, Joyce & Showers (1983) asserted, teachers may expect skills to be transferred simply from attending some form of training. According to these researchers, teachers who do transfer skills easily, have been aware of the potential problems and have consciously extended themselves, and accepted the discomfort as part of the learning process. If skills are developed to a high degree at the point of training and include feedback, the chances of transfer are higher. Joyce & Showers (1983) maintained that it takes 15–20 demonstrations and many opportunities to practise over an extended period for executive control to be established. 'One- or two-day workshops simply do not provide enough time to develop the degree of competence necessary for most trainees to be able to apply a new skill in the work setting' (p. 17). Practice, too, must be done in the context for which it is intended.

Learners can be taught 'high road' transfer through the abstraction of rules or by anticipating applications (Perkins, 1986). If the learner reflects on his or her problem-solving processes, and can generalise about elements which help the process or rules for problem solving are abstracted, then the rules of transfer can be applied to a range of contexts. To further encourage 'high road' transfer, the learner can anticipate additional application situations so that when they occur, transfer may more easily occur (Perkins, 1986:227–228).

To facilitate optimal transfer, Joyce & Showers (1983) have developed four principles to guide program developers. The first is that engaging in learning

new skills and strategies per se increases the ability to learn new ones, so that not only is a new skill being learned, but the process of learning is beneficial in itself, and makes subsequent new learning easier. Second, they believe that the more effective the learner, the more he or she understands the principle of transfer. It is for this reason that Joyce & Showers included the process of transfer in their training programs. Third, skills need to be developed in stages and involve 'overlearning' (p. 29) rather than attempt complete mastery in one trial. Finally, Joyce & Showers (1983) asserted that 'the more important an addition to one's repertoire a given model of teaching is, the greater the discomfort it will cause' (p. 30).

Summary

The literature reviewed in this chapter focused on two components of the larger picture of school improvement: first, the professional development of teachers in inservice programs, and second, the implementation of skills and knowledge learned in those inservice programs to the classroom. Both components contain factors which will influence whether or not change will occur as a result of teachers attending inservice programs.

Professional development of teachers was addressed in terms of the approaches taken by program developers, and the knowledge gained from inservice programs. It would appear that whatever approach is adopted, be it as 'skills and knowledge development', 'self improvement' or 'ecological change', a program will be more accepted by teachers if the facilitator takes into consideration the principles of adult learning. Additionally a program may be more effective in assisting implementation if the change process itself is built into the content of the inservice workshop.

It would appear that a teacher's knowledge, gained from experiences in the classroom, or teacher craft knowledge, will have an influence on the acceptance of an innovation and whether it is implemented. Therefore it is important for organisers of professional development to take into consideration a teacher's

beliefs and values about teaching and their different abilities to make changes. The practicality of programs, their ease of implementation and their ability to improve the learning of students, all affect a teacher's attitude towards implementation.

Of considerable significance in the transfer of skills and knowledge is the level of support for teachers as they attempt to make changes. Those changes may conflict with current practice, teachers may therefore feel a sense of discomfort, and implementation may be abandoned.

The next chapter describes the methodological procedures and collection of data for a study of the implementation of an inservice program.

Chapter 4 describes the methodology and data analysis employed in this study and outlines the methodological issues which arise in a naturalistic inquiry.

In answering the three Research Questions, the study involved four separate procedures, using four sources of data, and four data-gathering methods. Table 1 indicates, diagrammatically, how these elements form the structure of the study to address three Research Questions, as shown fully in Chapter 1. Briefly, the Research Questions sought to examine a particular inservice program, *Teaching for Effective Learning* and its conceptual structure, namely Atkin's Framework for Effective Teaching; its veracity and extent of innovation; participants' perceptions of Atkin as a presenter and benefits of the workshops; and teachers' practice in classrooms. The three Research Questions sought, in general, to find out if a particular process of critical analysis can reveal useful information to inform professional development planners.

This chapter is structured to expand on the material outlined in Table 1.

Table 1: Overview of the structure of the study, timing, data sources and data gathering methods.

Focus of the study	Procedure	Data source	Data gathering methods
<p>Phase 1</p> <p>Research Question 1</p> <p>Major focus:</p> <p>The relationship between the theory and practice of the <i>Teaching for Effective Learning</i> inservice program</p>	Procedure 1	<ul style="list-style-type: none">• Atkin's publications• <i>Teaching for Effective Learning</i> workshops• Short-term/ long-term int-view group• Pre-post work-shop inter-view & obser-vation group	<ul style="list-style-type: none">• Document analysis• Observation• Interview
<p>Phase 2</p> <p>Research Question 2</p> <p>Major focus:</p> <p>Transfer of skills and knowledge from the <i>Teaching for Effective Learning</i> workshops to classrooms</p> <p>Research Question 3</p> <p>Major focus:</p> <p>Factors influencing implementation</p>	Procedure 2	<ul style="list-style-type: none">• Short-term/ long-term interview group <p>N = 10</p>	<ul style="list-style-type: none">• Interview
	Procedure 3	<ul style="list-style-type: none">• Pre-post work-shop interview and observation group <p>N = 6*</p>	<ul style="list-style-type: none">• Classroom observation• Interview• Document analysis
	Procedure 4	<ul style="list-style-type: none">• Questionnaire group <p>N = 30**</p>	<ul style="list-style-type: none">• Questionnaire

NB * Two teachers from the pre/post interview and observation group, who demonstrated a higher than average level of implementation, were interviewed and observed for ten full teaching days in 1994, to gather more data relating to their use of Atkin's Framework for Effective Teaching and to ascertain whether these teachers thought there was improved learning for their students.

** Fifteen teachers responded to the questionnaire.

Data gathering methods

Data gathering approaches used in this study were document analysis, observation, interviews and a questionnaire.

Document analysis

Documents used for analysis in this study were Atkin's publications and teacher journals. Lincoln & Guba (1985) describe how document analysis may include such items as letters, diaries, speeches and newspaper editorials. Woods (1986) asserts that the most commonly used documents in research are official and personal documents, and Walker (1985) points out that it is a useful process at the beginning of an investigation when the researcher is trying to determine 'the purposes, rationale, and history of a program' (p. 64), and can provide supporting data for observation and interviews in qualitative research.

Observation

Participant observation

Participant-observation allows the researcher to enter the field and engage in close contact with the people or situation under study. The researcher, according to Lincoln & Guba (1985:192), is the 'human-as-instrument'. Trustworthiness of the findings therefore, depends largely on the skills, competence and rigour of the person doing the fieldwork. While the frailties of human nature might appear to make this problematic, Lincoln & Guba (1985) argue that the researcher's insight and tacit knowing can also be an essential part of an inquiry. The value of the 'human instrument' lies in the individual's flexibility and adaptability. The intuitive nature of humans allows for hunches to be followed which may throw new light on a previously unexplored situation. While tacit knowing may be dismissed as subjective, 'tacit knowledge like values intrudes into everyday inquiry whether or not the investigator recognises that fact or is willing to own it' (Lincoln & Guba, 1985:197). It might be wiser to acknowledge intuitive knowing, particularly as professional experience, than deny its existence. Far from being 'soft' and 'subjective', tacit knowing is an essential part of an interpretive/ naturalistic inquiry, particularly as the structure, at least to

begin with, is not fully determined (Lincoln & Guba, 1985). Following hunches may provide the structure needed to shape the inquiry. Since, according to Lincoln & Guba, tacit knowledge must ultimately be formalised and examined through language and then communicated to others, its value can be widely examined and checked against other data.

Direct observation: video recording

While the researcher acts as the instrument for participant observations, direct observation tends to be more deliberate and systematic. How systematic or formal the observation system will depend on the purpose of the exercise. Whatever method used, there is an assumption that the observer remains separate from the observed (Erickson, 1986).

Walker (1988) maintained that the advent of the video recorder overcame some of the problems of inter-observer reliability, selectivity and validity, which had been problematic for earlier observation studies. At the same time it, like most other techniques, had some limitations. Most problematic is the intrusiveness of the technology and the reluctance of participants to be so committed to record. While video-taping allows observational data to be collected which is more objective, Walker (1985) argues that the camera will capture only those aspects which the human recorder deems to be of interest, and therefore 'the operator acts as interpreter (p. 55).

Interviewing

The purpose of interviews, according to Patton (1990:278) is to 'access the perspective of the person being interviewed' and to 'find out from them those things we cannot directly observe' such as feelings, thoughts and intentions, past events or meanings people attach to situations. Qualitative interviewing, according to Patton, allows the researcher into the world of the interviewee and assumes that 'the perspective of others is meaningful, knowable, and able to be made explicit' (p. 278). Because interview responses are the subjective perceptions of those being interviewed, which can be influenced by 'distortion due to personal bias, anger, anxiety, politics, and simple lack of awareness'

(Patton, 1990:245), their value is limited. Therefore, Patton holds, observations provide a useful cross-check on interviews and self-report data in general.

In this study the *general interview guide approach* (Patton, 1990) to interviewing was adopted. This style of interviewing, involves a set of 'topics and issues to be covered [which] are specified in advance, in outline form; [the] interviewer decides [the] sequence and wording of questions in the course of the interview' (Patton 1990:288). The guide is formulated in order that the same issues can be addressed with a range of people. A particular subject is predetermined, though the interviewer can explore and probe within the boundary of that topic.

Questionnaires

Questionnaires can serve a purpose of further exploring, with a wider sample, data which had indicated 'categories, perspectives and reactions' (Woods, 1986:115), and can reduce complexities and indicate structures and patterns (Woods, 1986).

In data gathering, questionnaires have an advantage over interviews because of their capacity to collect information from a range of people in wide geographic locations (Gay, 1976 ; Slaven, 1992). Gay (1976) argues that questionnaires are more efficient in terms of time and cost than interviewing, though the opportunities available in interviewing to establish rapport with respondents, clarify any ambiguities and explain the purpose of a study, is not available with questionnaires. Well-constructed questionnaires are easy to administer and fill in, and can provide direct comparison of groups and individuals. The disadvantages are that their development and analysis are time-consuming, that the researcher must have a clear objectives, and that it is difficult to explore an issue in depth without a long questionnaire (Walker, 1985).

Procedure 1

Purpose of Procedure 1

Procedure 1 was designed to address Research Question 1, that is, to examine the relationships between the conceptual structure of Atkin's *Teaching for Effective Learning* inservice program, the research literature on teaching and learning, workshop content and Atkin's style of presentation. The data gained from Research Question 1 was considered essential background information in addressing Research Questions 2 and 3, which related to implementation of skills and knowledge learned in the workshops.

In answering Research Question 1, four key factors were taken into consideration, namely:

- The conceptual structure inherent in the inservice program *Teaching for Effective Learning*.
- The extent to which the conceptual structure reflects the existing literature on teaching and learning.
- The congruence between Atkin's theory and practice.
- Atkin's personal presentation style.

Data source for Procedure 1

Data was obtained from Atkin's publications, the *Teaching for Effective Learning* workshops, teachers from the pre- and post-interview and observation group, and from the short-term/long-term interview group.

Methodology for Procedure 1

Document analysis, participant observation, direct observation and interviewing were the methodologies used in Procedure 1.

Document analysis

Analysis of the following documents was undertaken for the examination of the conceptual structure of the *Teaching for Effective Learning* workshops, that is,

Atkin's Framework for Effective Teaching: five papers (Atkin, 1984, 1990, 1992a, 1993, 1994); Atkin's unpublished PhD thesis (1977) and *Inservice course notes* (1992b). The last document was provided to participants in Atkin's (1992) *Teaching for Effective Learning* inservice program. A detailed description of Atkin's Framework for Effective Teaching, ascertained from the analysis of these documents, is presented in Appendix 1.

Observation

Two types of observation were utilised in addressing Research Question 1: participant and non-participant observations of Atkin's *Teaching for Effective Learning* inservice workshops. In 1991 the researcher attended two days of a six-day series of Atkin's *Teaching for Effective Learning* workshops. At this workshop, the researcher, acting as 'human-as-instrument' (Lincoln & Guba, 1985), took notes relating to both the content and processes of the workshop, and speculated about whether it was Atkin's Framework for Effective Teaching or her personal presentation style (or some combination of both) which had led to the popularity of the inservice program. Data gathered in the 1991 *Teaching for Effective Learning* workshops were checked against direct observation (video-taped) data gathered at another series of *Teaching for Effective Learning* workshops in 1992, and through interview data from 1992 and 1993.

In 1992, with Atkin's permission, a series of three, two-day *Teaching for Effective Learning* workshops were video-taped, to analyse the content and process of the workshops. The analysis was undertaken with the following aims:

- to examine the congruence between Atkin's espoused theory (that is, the Framework for Effective Teaching) and practice;
- to identify aspects of the workshops which teachers could be expected to implement in their classrooms;
- to appraise Atkin's personal presentation style, and to ascertain whether or not that played a part in the reported popularity of Atkin's *Teaching for Effective Learning* inservice programs.

A video camera was set up in a fixed position at the back of the room (see Appendix 2) focused on Atkin alone. No effort was made to make a quality production, but simply to record material in order to see the Framework in practice and Atkin's methods of presentation. Because the camera was not focused on the participants, but rather on Atkin, participants accepted the presence of the camera. The quality of the technology meant that the participants' voices were picked up only occasionally on the microphone. Some activities were not recorded, at the request of participants, but detailed notes were made at these times and all discussions and feedback sessions following them were video-recorded.

The seven tapes were viewed twice. The first viewing was to ascertain the content and processes of the inservice program. *Inservice course notes* (1992b) served to clarify points which were not clear from the video-tape transcripts; in particular, references to the overhead projections taken from the *Inservice course notes*. Dialogue was transcribed and the researcher's comments inserted in reference to the overhead transparencies and activities. A segment of the transcript is presented in Appendix 3. The second viewing of the video-tapes was undertaken to analyse Atkin's personal characteristics of presentation.

Interviews

Data relating to Atkin's personal presentation style was taken from interviews with two groups of teachers, the pre- and post-interview and observation group, and the short-term/long-term interview group. Interviews with these groups will be described in detail under Procedures 2 and 3.

Note: A detailed description of Atkin's theoretical framework and the content and processes of the *Teaching for Effective Learning* workshops, ascertained by the researcher, from the methodology described, is presented in Appendix 1.

Procedure 2: Short-term/long-term interviews

Purpose of Procedure 2

The major purpose of the two interviews was to address Research Questions 2 and 3, that is, to ascertain which aspects of the inservice program, *Teaching for Effective Learning*, the teachers valued and translated into classroom practice (Research Question 2); and which factors helped or hindered implementation (Research Question 3).

The second purpose of Procedure 2 was to ascertain teachers' perceptions of Atkin as a presenter, and to triangulate data gathered from direct and participant-observation—that is, data for Research Question 1.

Data source for Procedure 2

The source of data for Procedure 2 was the participants in the 1992 video-taped *Teaching for Effective Learning* workshops. From a group of fifteen, ten teachers were chosen as the sample for this study. The selection decision was made on the basis that the ten were practicing teachers, and had immediate opportunities to implement what they had learned in the workshops. Those participants not chosen were administrators or consultants. This group of ten teachers was interviewed twice: at the end of the series of workshops, and after an interval of one year. Verbal permission to conduct these interviews was sought and obtained.

Methodology for Procedure 2

All short-term/long-term interviews used in Procedure 2 were in the form of the *general interview guide approach* (Patton, 1990). A set of specific topics were addressed in taped interviews, but a free flow of conversation was allowed. The interview guide was formulated in order that the same issues—that is, Atkin as a presenter and issues of implementation—could be addressed with all participants in this group.

Design and administration of Procedure 2

The first of these interviews (short-term) had a strong emphasis on the congruence between Atkin's claimed need for good relationships between teacher and students, and the relations she established in the workshops.

Prior to conducting this short-term interview, the researcher had clarified with Atkin what she meant by 'good relationships'. Atkin was asked: What would a teacher be doing, who was providing, for their students, 'a sense of security'; who was 'building and maintaining self-esteem', and 'modelling unconditional love', 'expressed through care, concern, belief in and acceptance'? (*Inservice course notes*, 1992).

A list of responses from Atkin was compiled from the transcript of the interview with her. In the short-term interview, two questions were asked of teachers in this group and the list of characteristics was shown to them as a stimulus for their thinking. Participants were asked:

- (i) What did you think of Atkin as a presenter?
- (ii) Do you think Atkin practised what she preached?

The second (long-term) interview with this group of ten teachers was conducted one year after the final workshop. Again teachers were asked (amongst other questions): Do you think Atkin practised what she preached?

Long-term interviews began with a reassurance that the researcher was not concerned with an accountability or check on the teachers' use of the skills and knowledge learned in the *Teaching for Effective Learning* workshops. Emphasis was placed on the researcher's interest in use and non-use of skills and knowledge learned in the workshops, and possible reasons for both use and non-use. Confidentiality was also assured. An introductory general statement was made by the researcher: 'I am interested to know whether you think about, or use Atkin's model, one year after you attended the workshops.'

Using the *general interview guide approach* (Patton, 1990), the following set of specific topics were addressed in a taped interview.

- Implementation of skills and knowledge learned in the workshops.
- If implementation had occurred, any perceived changes for students.
- Support within their schools for the implementation.
- Teachers' possible dissemination to others.
- Participant's opinion of Atkin as a presenter.
- Participant's opinion of the workshops.
- Participant's understanding of one of the key components of the workshop: Atkin's *Integral Learning* model.

Two examples of the long-term interviews, are provided in Appendix 4.

Procedure 3: Pre-workshop/post-workshop interviews, observations, and teacher journals

Purpose of Procedure 3

The major purpose of Procedure 3 was the same as that for Procedure 2. It addressed Research Questions 2 and 3, that is, to ascertain which aspects of the inservice program, *Teaching for Effective Learning*, the teachers valued and translated into classroom practice (Research Question 2); and which factors helped or hindered implementation (Research Question 3).

The second purpose of Procedure 3 was to ascertain teachers' perceptions of Atkin as a presenter, and to triangulate data gathered from direct and participant-observation, that is data for Research Question 1.

Procedure 2 closely scrutinised a small group of teachers who had elected to participate in the Atkin inservice workshops, to ascertain their levels of implementation and attitudes towards Atkin and the workshops.

Data source for Procedure 3

The sources of data for Procedure 3 were:

- teachers who had attended an Atkin six-day *Teaching for Effective Learning* workshops;
- teachers from those workshops, teaching in their own classrooms;
- journals compiled by teachers attending those workshops;
- student work;
- *Inservice course notes* (1992b).

It was necessary to identify teachers participating in Atkin's *Teaching for Effective Learning* workshops, and who would be willing to participate in the study, that is, to be interviewed and observed in their classrooms. Initially a workshop group from the Northern region of Tasmania was selected for the study, but only seven enrolled. A group of four teachers who indicated that they were in a position to implement the innovation were selected for involvement. They were interviewed and observed in their classrooms prior to attending the workshops. As a result of the enrolment problems this Northern group was combined with a workshop group which had begun their course in the Southern region of Tasmania in 1992. The researcher arranged for Atkin to provide a short session to bring the four Northern teachers up to the participation level of the rest of the workshop group, and they joined the second session of the Southern workshop at the beginning of 1993. To supplement the numbers of teachers in this group, two teachers were selected from the Southern group to join the study, to be interviewed and observed.

The six teachers were all female. They taught, respectively, in grade 3/4 (full time), grade 2 (full time for one term, part time for two terms), grade 1 (full time), prep/1 (part-time teaching and assistant principal), prep (part-time), and a teacher/librarian (part-time teaching and acting assistant principal).

Methodology for Procedure 3

Procedure 3 involved:

- Interviews with teachers attending the 1993 *Teaching for Effective Learning* workshops.
- Observations of teachers in classrooms.
- Document analysis of *Inservice course notes* and teachers' journals. The latter were to record impressions of their attempts to implement aspects of Atkin's Framework for Effective Teaching.

Design and administration of Procedure 3

Pre- and post-inservice interviews

Three interview sessions were conducted during the year in which this group of teachers attended the *Teaching for Effective Learning* workshops. Interviews were undertaken on the day of the observations. For four of the teachers, the first interview was conducted prior to attendance, early in the school year; the second interview a month after completion of their second workshop, and the third, after completion of the final two days, at the end of the year. The two teachers who joined the original four were interviewed three times, concurrently with the original four, but as they had attended their first workshop at the end of the previous year there was no pre-workshop data collected. It should be noted that both teachers of the latter teachers claimed that, as the first workshop had consisted of 'so much theory', they were waiting for the second to learn skills they could implement in their classrooms.

Pre-workshop interviews

Questions were aimed at providing background for understanding any future transfer of skills and knowledge from the workshops to classrooms. Therefore pre-workshop interviews sought to establish teachers' ideas which influenced their current practice, their attitudes towards previous inservice workshops, and their reflective practices. A rationale for each pre-workshop topic is provided.

Pre-inservice questions were designed to ascertain:

- (a) factors which the literature indicated could lead to implementation or non-implementation of an innovation (for example, Schön's, 1983, assertion about reflective practitioners) and
- (b) ideas behind the teachers' teaching practices.

Using the *general interview guide approach* (Patton, 1990), the following topics were addressed during the pre-workshop interview:

- Years of experience as a teacher.
- Reasons for attending the Atkin inservice workshop.
- Opportunities to reflect on teaching practices.
- How other inservice workshops had helped classroom practice in the past.
- Current ideas behind teaching practices.

The purpose of asking the teachers about their years of experience was two-fold. First, it was designed as a 'getting to know you' rapport-building exercise. Second, as there were no presuppositions about the relationship between experience and ability to transfer skills and knowledge, the question was asked in order to reflect, at the end of the study, on whether or not experience was a factor in transfer.

Asking participants why they wished to take part in the Atkin inservice workshops was aimed at not only establishing the reasons for attending the workshops, but to explicate any expectations the participants may have held. It was hoped that data gathered from further observations and interviews could show whether the meeting of these requirements in the workshops necessarily translated into changed practice in the classroom.

The topic of reflective practice was included as a result of Schön's (1983) suggestion that a person who reflects on their professional practice may be

disposed to relinquish their established competence while developing new skills and knowledge.

Discussing the value of past workshops was designed to provide the researcher with an indication of how the teachers may approach an inservice workshop—whether, in the past, they perceived that they had transferred learning from inservice programs to their classrooms. If teachers were to indicate that, in the past, they had implemented only ideas and strategies with which they felt comfortable, it would indicate a tendency to transfer material from a workshops in a ‘horizontal’ manner (Joyce & Showers, 1983). ‘Vertical’ transfer on the other hand, would be indicated in the reporting or observations of disruption to normal practice while new skills were being incorporated into their teaching repertoire. Joyce & Showers (1983) claimed that teachers who may adopt a positive or even enthusiastic attitude towards the content and process of an innovation, are unlikely to successfully implement it if they do not think conceptually about the ‘what’, ‘how’ and ‘why’ of their teaching. The implication of Joyce & Showers’ claim is that the non-reflective practitioners would be more likely to transfer only those strategies which did not lead to discomfort on the part of the teacher and students.

Finally, asking the teachers about their ideas behind their teaching practices was designed to ascertain whether they could, or would, articulate a teaching and learning theory, and whether or not their existing ideas coincided with Atkin’s espoused beliefs. In interviewing the teachers, specific reference to concepts contained in Atkin’s Framework for Effective Teaching, such as *relationships*, *psychological conditions* for learning or the engaging of *appropriate mental processes*, were avoided in pre-workshop interviews, so as not to ‘lead’ participants or influence responses.

Mid-year interviews

The second interview sessions began with a statement that the researcher was not concerned with an accountability or check on the teachers’ use of the skills and knowledge learned in the *Teaching for Effective Learning* workshops.

Emphasis was placed on the researcher's interest in use and non-use of skills and knowledge learned in the workshops, and possible reasons for both use and non-use. Confidentiality was also assured. Topics addressed in the taped mid-year interviews were as follows:

- the teachers' perceptions of the *Teaching for Effective Learning* workshops and Atkin as a presenter;
- the teachers' understanding of Atkin's *Integral Learning* model after two workshops;
- transfer of skills and concepts, learned in the workshops, to their classroom practices.

Post-workshop interviews

Interviews began with a similar assurances that was used in previous interviews, regarding the researcher's intentions and issues of confidentiality. Taped post-workshop interviews, using the *general interview guide approach* (Patton, 1990) focused on the following issues:

- the teachers' understanding of Atkin's Framework for Effective Teaching in general, and her *Integral Learning* model in particular, after the final workshop;
- transfer of skills and concepts, learned in the workshops, to their classroom practices, and
- factors which helped or hindered implementation.

A sample of a pre-inservice, mid year and post-inservice interviews are shown in Appendix 5.

Pre/post-inservice observations

Observations of teachers in their classrooms were designed to serve as a means of validating data obtained in the interviews, relating to skills and knowledge learned in the workshops.

An ideal situation, one which would minimise researcher influence, would have been that the teachers were ignorant of the purpose of the observations.

However, in accordance with the University of Tasmania's Ethics Committee procedures and to gain permission from the teachers and their principals, the purpose of the observation—to examine implementation of Atkin's Framework—had to be disclosed. The possible bias occurring in teacher classroom behaviour, as a result of this action, is recognised.

Direct observation of three teachers was achieved through the use of a video camera. In addition, Field Notes were taken in situ for the other three teachers, as they declined the request for a video camera in their classrooms. Observations occurred on three occasions throughout the year for five teachers and on two occasions for one teacher. Each teacher was interviewed at the time of the observations and some children's work was collected to illustrate use of certain strategies. Video-taping and note taking was largely done from a fixed position. When children were gathered in front of the teacher the video camera was kept in one position; when children were undertaking a variety of tasks, and it seemed appropriate, the camera was moved to different positions to observe the interaction between the teacher and students.

It should be noted that because this was a naturalistic inquiry, that is, there was no attempt to control the environment or the participants (the teachers and students) the contingencies of a primary school day impinged on the data collection sessions. The researcher was in the classrooms for a day but observations of teaching ranged from two to three hours, depending on the teacher's program. It was a common occurrence that, despite prior assurances that the day of the researcher's visits would be appropriate for systematic observations, there were disruptions for such events as library visits, daily physical education, music, school photograph sessions, visiting guests, and the exit from the classroom of groups of children for such things as special education, visits to eye specialists or the school dentist. Interviews with teachers, which produced a rich source of data, were seen as the prime source of information. However observations were considered an important component of

the study because they could validate information gained from interviews and the questionnaire, and could point to the difference between what Argyris & Schön (1974) described as 'espoused theories' and 'theories in use'.

Children's work was collected as evidence of activities which the teachers reported during interviews, and because the researcher was not always present when many of the reported activities took place.

In 1994 a further observation study was undertaken to expand on data collected in 1993. Two teachers from the pre- and post-interview and observation group, who had demonstrated attempts to implement aspects learnt in the workshops, were observed for ten teaching days. Field Notes, taken at that time took the form, as Erickson (1986) described it, of 'writing like crazy' (p. 119), providing a rich description of the classroom, the teacher's and students' behaviour.

Teacher journals

Each of the six teachers in the interview/observation group was asked to keep a journal, recording their impressions of the inservice program, and their attempts at, and outcomes from, the implementation of aspects learned in the workshops.

- Two samples of teacher journals are provided in Appendix 6.

Procedure 4: Questionnaires

Purpose of Procedure 4

The purpose of the questionnaire was gather data which could triangulate and confirm data gathered from Procedures 2 (that is, short-term/long-term interviews) and Procedure 3 (that is, pre- and post-interview and observation).

Data source for Procedure 4

By the end of 1993, Atkin had conducted, in Tasmania, three six-day workshops entitled *Teaching for Effective Learning*. These workshops, comprising three two-day sessions, were normally spread over a twelve month period. The first

Tasmanian series of workshop began at the end of 1990 and was completed in 1993. The second series began in 1991 and was completed in 1993. The third of the six-day workshops was conducted within the calendar year of 1992. A total of approximately seventy teachers enrolled in the *Atkin Teaching for Effective Learning* workshops between 1990 and 1993, though not all teachers completed their particular series of workshops.

The sample for the questionnaire group was drawn from all remaining practising teachers consisting of a total of thirty teachers who had completed six days of the *Teaching for Effective Learning* series of workshops, but who were not involved in the interview/observation group or the short-term/long-term interview group. Of the thirty teachers sent a questionnaire, fifteen replied. In this way, data gathering for the study was drawn from all workshops conducted in Tasmania from 1990-1993.

Design and administration of Procedure 4

The questionnaire was designed predominantly to gauge the level of implementation of aspects taught in the workshops. Questions related specifically to (a) implementation of aspects learned in the *Teaching for Effective Learning* workshops and, (b) factors which helped or hindered implementation. Each question was spaced on the form to allow for responses (see Appendix 7). Teachers were provided with a choice of format for replying: either in writing on the forms, or through an interview by telephone at a time nominated by them. Anonymity was guaranteed in a covering letter and assurance given that the researcher was not concerned with accountability in relation to teachers having implemented aspects of the *Teaching for Effective Learning* workshops.

Data analysis

In addressing Research Question 1, relating to the relationships between the conceptual structure of an inservice program, the literature which relates to that conceptual structure, workshop activities and methods of presentation, data was obtained from:

- Atkin's publications, *Inservice course notes*, Atkin's PhD thesis (document analysis).
- The *Teaching for Effective Learning* workshops (through observation).
- Participants in the workshops (through interview).

A process of concept identification was applied to all documents and key concepts identified. Descriptive data was derived from video-tapes, and key concepts were identified and compared with data from documents. The results of this examination are presented in Appendix 1.

Observation data relating to Atkin's presentation style were analysed according to codes derived from her own Framework for Effective Teaching. These codes are described below in relation to data concerning Atkin, taken from teacher interviews.

In addressing Research Questions 2 and 3, which related to the implementation of skills and knowledge learned in the workshops and factors which influenced implementation, data was obtained from:

- Teachers in classrooms (through observations, interviews and a questionnaire).

Data obtained from observations, interviews and the questionnaire were analysed inductively.

Inductive data analysis

Unlike deductive analysis which operates with a priori theories or hypotheses, inductive analysis begins with the 'data themselves from which theoretical categories and relational propositions may be arrived at by inductive reasoning processes' (Lincoln & Guba, 1985:332). It is a process, which Lincoln & Guba describe as having similar characteristics to content analysis, that is, 'a process aimed at uncovering embedded information and making it explicit' (p. 203). Inductive analysis, according to Patton (1990:44), 'begins with specific

observations and builds toward general patterns' without presupposing in advance what the important dimensions will be. The building of patterns occurs through developing categories which 'usually derive from Research Questions, hypotheses, key concepts or important themes' (Miles & Huberman, 1984:56). Codes can be developed from the categories to organise data.

In this study categories were developed from the Research Questions, from key concepts and important themes. A system for coding was used to organise data related to the following:

- Atkin's personal presentation style.
- Transfer of skills and knowledge from workshops to classrooms.
- Factors which helped or hindered implementation.

Atkin's personal presentation style

Codes were taken from her own Framework for Effective Teaching, that is *relationships, psychological conditions for learning and engaging appropriate mental processes*. Two categories also emerged from the data, namely, *command of subject matter*, and *teacher craft knowledge*.

Transfer of skills and knowledge from workshops to classrooms

Joyce & Showers' (1983) concepts of *horizontal* and *vertical* transfer were deemed to be the most appropriate categories for data analysis. If skills were transferred directly from the workshops to the classroom, with little or no disruption to the teacher's practice, it would be said to have been transferred *horizontally*. If new learning was required in order to implement a new skill, and a disruption to practice was involved while the teacher attempted to gain 'executive control', then the skills would be seen as having transferred *vertically*.

Factors which helped or hindered implementation

Codes related to *principal support, collegial support, time, other school commitments, insufficient information* from workshops.

Additional categories emerged from the data relating to *criticisms* of the workshops.

Summary

The structure of the study, outlined in this chapter, was designed so that three Research Questions could be addressed. Procedure 1 provided an indepth understanding of conceptual underpinnings of the *Teaching for Effective Learning* workshops, that is, Atkin's Framework for Effective Teaching, and a detailed knowledge of how that Framework was presented in practice in the *Teaching for Effective Learning* workshops. Atkin's presentation style was ascertained through Procedure 1 and triangulated through Procedures 2 and 3.

The methodology for Procedures 2, 3 and 4 was designed to allow the researcher to investigate the impact of the *Teaching for Effective Learning* workshops on participants in terms of implementation in classrooms. The four data-gathering methods allowed for validation of data. In Chapters 5 and 6, the data are presented.

Chapter 5

Results: Theory and practice of the *Teaching for Effective Learning* inservice program

Chapters 5 and 6 report the results of the investigation into an inservice program, *Teaching for Effective Learning*, developed and presented by a private educational consultant, and the workshop's impact in terms of implementation.

Chapter 5 is concerned with the inservice program itself, its conceptual structure, Atkin's Framework for Effective Teaching, and the relationship between Atkin's theory and practice. This included a study of Atkin herself as a workshop presenter. The chapter also discusses the results of a literature review which compared the dimensions of Atkin's Framework for Effective Teaching and some of the relevant literature. The chapter provides data relating to Research Question 1.

Research Question 1:

What is the relationship between the conceptual structure of the *Teaching for Effective Learning* inservice program, the research literature on teaching and learning, workshop content and the methods of presentation?

In answering this research question, four key factors were taken into consideration, namely:

- The conceptual structure of the inservice program *Teaching for Effective Learning*.
- The extent to which the conceptual structure reflects the existing literature on teaching and learning.

- The congruence between theory and practice of the inservice program.
- Atkin's personal presentation style.

Conceptual structure of the *Teaching for Effective Learning* workshops

The following documents were selected for the analysis of the conceptual structure of the *Teaching for Effective Learning* workshops: five of Atkin's papers (Atkin, 1984, 1990, 1992a, 1993, 1994); Atkin's unpublished PhD thesis (1977) and *Inservice course notes* (1992b). The last document was provided to participants in Atkin's (1992) *Teaching for Effective Learning* inservice program.

The document analysis involved a comparison between Atkin's publications, in particular those since 1990, and between these publications and the *Inservice course notes* (1992b). Comparisons involved identifying key concepts and included Atkin's use of both language and diagrams to describe her theoretical framework. Her PhD study provided insights into the thinking behind the development of her framework, in particular her strong grounding in cognitive psychology.

A detailed overview of the conceptual structure of the *Teaching for Effective Learning* workshops, developed by the researcher from the document analysis of Atkin's publications, and from transcripts of a series of video-taped *Teaching for Effective Learning* workshops, is presented in Appendix 1, along with a full description of the content and processes of the workshops.

Document analysis of Atkin's publications and an examination of her inservice program, the *Teaching for Effective Learning* workshops, and its *Inservice course notes* (1992b) indicated that the conceptual structure of her inservice workshops was stated in the Framework for Effective Teaching. This Framework consisted of three key concepts, or 'dimensions' (Atkin, 1994), namely, *relationships* between students and teacher, *psychological conditions* for learning, and *appropriate*

mental processes. While a recent publication of Atkin's (1994) highlighted the importance of the balance between all dimensions, the analysis revealed that the 1990, 1992a and 1993 publications and the *Inservice course notes* (1992b), contained similar material and focused almost entirely on the third dimension, the *mental processes of learning*. It was also this dimension of Atkin's Framework which consumed approximately ninety per cent of the teaching content of the inservice program which was at the centre of this study.

Use of language

The terms, *relationships*, *psychological condition* and *appropriate mental processes*, used in this study were taken from a publication (1994) and diagrams found in the *Inservice course notes* (1992b). However since circa 1993 Atkin has represented the three dimensions diagrammatically as three interrelated components, with new, broader titles: 'Human Spirit', 'Learning Environment' and 'Guiding the Learning Process'. Within these overlapping models the three original terms can be found, that is *relationships*, *psychological condition* and *appropriate mental processes*.

While the third dimension relates broadly to the mental processes of learning, in her publications Atkin uses such terms as 'thinking', 'effective mental processes for learning' and 'appropriate mental processes' interchangeably. 'Thinking' is a heading used in two publications (1992a, 1993) relating to the third dimension of Atkin's framework. Under this heading she includes three components: first, cognitive functioning such as memory—dealt with briefly in terms of storage and retrieval in sensory modalities; second, two theories of the brain, namely its evolution and the theory of processing modes of the left and right hemispheres of the brain, and third, Herrmann's Whole Brain model (1989)—a combination of the two other brain theories.

'Effective mental processes for learning' is a heading used in the *Inservice course notes* (1992b). Under this heading the following are listed:

- Modes of memory
- Some features of memory
 - Sensory Information Storage

- Short term/Working Memory
- Implications for teaching practice
- Simplified anatomy of the brain
- How the brain processes information
- Brain dominance
 - What's the basis of brain dominance?
 - Determining your preferred thinking style
 - Brain dominance patterns and learning
 - Strategies for whole brain processing
- Features of long term memory

Use of diagrams

Atkin uses a number of diagrams to illustrate all aspects of her Framework, but the third dimension (*appropriate mental processes*) has the greater number. The *Inservice course notes* (1992b) contained four diagrammatic models, namely:

1. A diagram representing Herrmann's Whole Brain Model (1989).
2. A diagram of Atkin's *Integral Learning* model (1992).
3. A diagram indicating a range of strategies 'mapped' (1993:18) on to Herrmann's Whole Brain Model (1989) to indicate how strategies can be used to engage four way of thinking.
4. A diagrammatic model of human memory.

Herrmann's Whole Brain Model (1989) describes four cognitive styles, and Atkin draws on this concept in designing her *Integral Learning* model. A diagrammatic model of human memory appears only in the *Inservice course notes*, but not in Atkin's other publications, but strategies for human memory were extensively used in the workshops, and the diagram was shown repeatedly as an overhead transparency.

Participants in this study who attended workshops in 1993 received two more models presented in diagrammatic form, both describing and explaining the 'whole picture' of Atkin's Framework for Effective Teaching. The first is shown as three overlapping ovals previously mentioned, the second as a metaphor, the 'garden'.

A comparison of diagrams representing Atkin's *Integral Learning* model between three of her publications indicated three versions and three different captions (see Appendix 1).

The conceptual structure and its relationship to the literature on teaching and learning.

A review of the literature relating to the dimensions of Atkin's Framework (see Chapter 2) revealed that she has not produced new ideas on teaching and learning per se, but has brought together a range of well-researched psychologies, blended them with more recent ideas about brain function, and presented them in a 'package' which appears, from the data, to be meaningful to teachers.

A review of the literature relevant to the dimensions of Atkin's Framework for Effective Teaching indicates that Atkin has brought together a wide range of teaching and learning theories in the development of her Framework. Atkin's emphasis on the importance of relationships in learning, a conducive environment, good communication and an integrated approach to learning, can be found in the literature of humanistic psychology (for example Rogers, 1969, 1983). Her emphasis on such things as meaningful learning, memory, motivation, readiness to learn and ownership in learning, relate directly to aspects of the cognitive field of psychology (for example Ausubel, Novak & Hanesian, 1978), while the assumptions underlying Atkin's model of *Integral Learning*, appear to include a range of theories, including theories of brain functioning (for example, Herrmann, 1989) Kolb's Experiential Learning Model (1984), and constructivism (Novak, 1990). However, in the literature no theories of learning combine theories from cognitive psychology with theories of brain functioning.

In Atkin's publications she uses some terms which are synonymous with those found in the literature on educational psychology, while others are used by

Atkin with a different meaning. However, Atkin makes no reference to others' use of the same or similar terms.

The congruence between the theory and practice of the inservice program.

Examining the relationship between the theoretical framework of Atkin's *Teaching for Effective Learning* workshops and the content and processes of the workshops, revealed the level of congruence between the two. Transcripts made from a video-taped series of workshops together with interviews with sixteen teachers provided data relating to congruence.

As previously stated, Atkin's Framework for Effective Teaching consisted of three dimension, namely *relationships*, *psychological conditions* and *appropriate mental processes*. It was therefore assumed that, to be congruent, the structure of the workshops and Atkin's teaching style would reflect these dimensions.

Structure of the workshops

Transcripts of the video-tapes of a series of workshops in 1992 revealed that there was an imbalance in the teaching of the three dimensions of Atkin's Framework for Effective Teaching. Less than an hour was explicitly devoted to the issue of *relationships*, a one and a half hour session of a six-day workshop was devoted to *psychological conditions* for learning, and the remainder focused on the third dimension of the Framework, *appropriate mental processes*.

Analysis of the transcripts indicated that as each concept was taught, Atkin used a specific teaching pattern. First an activity was undertaken, or Atkin made reference to the teachers' prior knowledge of classrooms, their students or life experiences. A discussion followed, often with Atkin asking questions which led to reflection on those experiences. Theoretical issues followed, and finally application of new learning was discussed. In this way Atkin was modelling her *Integral Learning* model.

When teachers were asked if they thought Atkin 'practiced what she preached' their description of Atkin's style clearly showed a congruence between the style and the theory of her Framework. Teacher responses will be dealt with in the next section: Atkin's personal style of presentation.

Atkin's personal presentation style

Data concerning the impact of Atkin's style were categorised according to the three dimensions of her Framework for Effective Teaching, namely *relationships*, *psychological conditions* for learning, and *appropriate mental processes*.

Two methodologies were used for this data: observations (direct and participant observation) of workshops and teacher interviews.

Participant observations

In 1991 the researcher attended a series of Atkin's *Teaching for Effective Learning* workshops as a participant observer. Field notes relating to Atkin's presentation style showed the following characteristics:

- Consistent smiling.
- Reflective listening skills.
- A capacity to remember names on being introduced to an individual.
There were thirty five participants, yet Atkin consistently referred to each one by name throughout the workshops.
- A sense of humour which resulted in a great deal of noticeable laughter in the room.
- An ability to handle a participant who tended to dominate discussions.
This was always achieved without resorting to disparagement.
- Availability to participants at all scheduled break times.
- The modelling of her theories in an apparent acceptance of a range of cognitive styles within the participants in the workshops.

Direct observation (video-tape)

Data from the video-tapes taken of Atkin's 1992 series of *Teaching for Effective Learning* workshops were categorised according to the dimensions of her Framework.

Interviews

Participants in the **short-term/long-term interview and pre- and post-interview and observation groups** (sixteen in total) were interviewed and asked two questions: 'What did you think of Atkin as a presenter?' and 'Do you think she practised what she preached?'

NOTE: A system of codes has been adopted to show the source of data from interviews and questionnaires. These codes are as follows:

- PPIO** pre- and post-interview and observation groups (numbered 1-6)
- SLT** short-term/long-term interview (numbered 1-10)
- Q** questionnaire

Relationships

Adults learn best in a climate of trust in which external criticism is avoided and where respect and concern for the learner is exhibited (Moore, 1988; Knowles, 1990; Conners, 1991). Similarly, Atkin (1994) maintained that a teacher develops good relationships with students by providing security and building and maintaining self-esteem. They would also 'model unconditional love expressed through care and concern, acceptance, belief in and expectation'. In responding to interview questions, teachers rarely used Atkin's terminology per se, though their responses made reference to these qualities. One participant only directly used Atkin's terms 'maintenance of self-esteem' and 'unconditional love':

In that workshop I don't think she was in the business of making people feel good about themselves and to grow in self-esteem. I think she was treating people as professional colleagues, so the maintenance of self-esteem was there (SLT 5, 1992).

She talks about unconditional love but she doesn't make the connection with what she is doing to us (SLT 5, 1992).

'Safe' 'secure' 'comfortable' were words used to describe how seven teachers felt about themselves in Atkin's workshops. Typical of their comments were:

I think everybody was encouraged to take part but there was not pressure because there was safety to take part. So there was none of this thinking: "I hope she looks the other way" (SLT 2, 1992).

She's a person you feel very comfortable with... very well adjusted and down to earth and very approachable—nothing pushy or uncomfortable. She pursues her own agenda, but in doing so doesn't push people to feel uncomfortable (PPIO 1, 1993).

You could take things on and it was a very comfortable atmosphere and non-threatening and yet you were trying new things (SLT 7, 1993).

Only one teacher expressed doubts about her own sense of security.

At one stage... the sense of security...when she was talking to me and I realised that my visual memory is not good and she had me visualising spelling a difficult word in front of other people I felt embarrassed by that. But that was the only time, and I guess I felt threatened. Apart from that incident—yes, certainly she modelled her theory (SLT 3, 1992).

Part of the sense of safety that six participants expressed, was their feeling that they would not be 'put down'. Characteristic comments were in terms of feeling 'an important member of the group', 'everyone was accepted'. One teacher remarked that even when wrong, it was safe to volunteer comments.

I felt quite happy about making comments and adding, knowing that I would get a positive and supportive response and not be put down. And I was happy if my comment was wrong or my comment was factually incorrect...even if Julia challenged that I would not have felt put down by that (SLT 5, 1992).

[Atkin] accepts everything you say in a positive way and very willing to explain again and accepting of questions. I didn't feel dumb in asking her to explain again (SLT 8, 1992).

Participants also expressed a belief that they were individuals in a group, and while not singled out, felt able to be seen and heard. For example:

She moved around the tables so she's not tied to one particular area so you feel you would have a chance of an input (SLT 2, 1992).

I think she got around everybody in small group work so that you knew that she knew what you were doing and made time...making appropriate comments...joined in just enough to challenge people (SLT 8, 1993).

I always felt that I was always involved in what she was doing; talking to me individually; I always felt included; everyone got a fair go; no-one seemed to dominate; she valued everyone's comments so you didn't have to compete for attention because she wasn't listening (PPIO 2, 1993).

She involved all participants over the days (SLT 2, 1992).

When she is talking she doesn't flick from person to person. She'll gain eye contact with you for some time and then move on, but she's also very aware when there's a head nod at any appropriate time, and she'll come back and say, "I saw you nodding Jill. Do you know someone like this?" And that to me is very good ... because that gives you an inroad to discuss a problem (SLT 3, 1992).

I liked the way she picked out a few people who were very quiet. She drew them out as part of the model she was presenting—that was a thing I liked (SLT 5, 1992).

Four teachers expressed the opinion that Atkin was able to keep control of those who otherwise may have dominated, using such strategies as 'offering time later' or using humour. They stated that:

One person won't dominate the discussion. There were quite assertive people in there, but I believe that Julia controls them very well. She'll listen to them. She doesn't put them down, but moves on (SLT 10, 1992).

There were plenty of opportunities when she could have a go at someone especially someone like me, because I'm really outspoken—I know what I do. There are times when I feel uncomfortable because of what I'd done, but she didn't bat an eyelid ... because she could have slayed me (SLT 1, 1992).

She doesn't put any one down. She says, "Can you leave that issue until afternoon tea and I'll address it there", or she uses her sense of humour and says: "If that goes on any longer..." (SLT 4, 1992).

Atkin's sense of humour appeared to make an impact on participants. Twelve of them commented on it, describing her humour in such terms as 'very nice', 'lovely', 'great', and 'very important'.

A great sense of humour—not a joke teller, but an anecdote teller, which I like...She related it to her children...able to laugh at herself and she's got an amazingly quick and down to earth sense of humour. She's very quick with a retort and getting on a wave length (SLT 5, 1992).

She's got a great sense of humour which is really good. The personal anecdotes gives us a sense of her as a person (SLT 3, 1992).

Another aspect of Atkin's style which clearly impressed participants, was not only her ability to remember names, but to do it 'quickly'. One teacher expressed this ability as 'horrifying', assuming that 'she must be using visualising and memory strategies, otherwise she couldn't do it' (SLT 6, 1993). Other typical comments were:

She remembered our names. I can't recall any incidents where somebody spoke and they weren't addressed by name in response ... she showed she knew each person as an individual. I know people who regard that as important— makes you feel important. She also remembered little things you'd talked about with her previously. You knew you'd been listened to on previous occasions and she also built on things that she remembered—individual comments people had made in groups.

I've been impressed by the way in which she remembered our names between this time and last time, considering how some of us had difficulty remembering who we were. So I think that's really very important if you are involved in this sort of thing to show that you are interested in them as people and as participants in the workshops (SLT 7, 1992).

Availability in breaks was deemed to be important for some. Two people commented that 'she's certainly been there if you need it'. Another said that Atkin conveyed an attitude of 'I'm here to share with you', while others claimed

that 'she comes across as such an unassuming sort of person' and that 'she has almost immediate acceptance with teachers'. Others elaborated further:

I warmed to her as a person. Really good about accepting comments and questions and really good about acknowledging people and sitting down with them... made me feel respected (SLT 2, 1992).

Through just her anecdotes of her children and everything you get to see that it's totally her life. Not just, "I am at work now, this is how I think" type. She's internalised everything that she does (PPIO 6, 1993).

Good in several ways. Didn't come over as closed or unfriendly. She did come over as an efficient on-task sort of person (PPIO 5, 1993).

She filled us in with nice little anecdotes about her family which brings it back to a more human level (SLT 3, 1993).

Psychological conditions for learning

Atkin maintains that certain psychological conditions need to be present for effective learning to occur. Those she cites are: *motivation, emotional involvement, readiness to learn, challenges, freedom to choose, to experiment, to make mistakes, to set own goals, to work at the learner's own pace*. Similarly, theories of adult learning (Knowles, 1990; Conners, 1991); suggest, among other issues, that adults learn best when they can see the goals of learning as important and relevant and when they have a measure of control over the content and process of their learning.

Comments made by teachers indicate that one of these psychological conditions, *motivation*, was evident in some measure. Participants appeared to be motivated to both attend the *Teaching for Effective Learning* workshops, and by the content and process of the workshops. Of six teachers who commented, two claimed a prior experience of Atkin's workshops, and four of Atkin's reputation, as the reasons for attending. Five participants expressed a general enthusiasm for Atkin's presentation, without being specific. They stated:

I loved the times that she poured stuff in. I could have listened another three hours (SLT 1, 1992).

I'm quite enthused. I like coming here because I feel that she does motivate me (PPIO 2, 1993).

I find it really easy to sit and listen to her—I could sit and listen to her all day without getting sleepy (PPIO 1, 1993).

In fact that is why I enjoyed Julia so much because I felt right. It was for me. I just—wanted something and she provided that (PPIO 5, 1993).

One participant was more specific about her motivation.

I enjoy it so much and now am I helping other children to learn more efficiently and more effectively for them, so their enjoyment comes out of ...I am intrinsically motivated to work with the children...And you want to see that coming out of children—being motivated to do their own thing...not because I want them to, but because they are really keen. And [the workshop] has really clarified that for me (PPIO 2, 1993).

More specific reasons for the positive attitude towards Atkin were that she was 'entertaining', that her 'conviction' 'made you think', that she renewed enthusiasm for students, and that your mind could not wander while she was presenting. Further comments included:

I thought she was a good presenter, [I] also found her entertaining. And I liked the anecdotes (SLT 6, 1993).

...and she practises in what she actually preaches. Like when I look back on the program she was getting us to think and discuss and bring the ideas forward...and then she would talk about those points. She wasn't really pushing. I mean she was pushing something on us but the way she introduced it I think made you think...she's right, that's true, and so it was so much more believable (PPIO 1, 1993).

I think [Julia] has such a conviction about the model herself that the way that she puts it across makes you think. It's not one of those workshops where you go in and have a cup of coffee and listen to what they have to say and go out and forget about it. It does make you think...When I first started I thought she was really good, brilliant. But since I've had to sit down and think about it and read about it and look at it in terms of my classroom...I think it's brilliant (PPIO 6, 1993).

She is a very charismatic person...just to spend time with someone like that, it is really good therapy I think. You come back and you think, "Yes,

it is worthwhile being a teacher and hanging there". It sort of recharges the batteries and renews enthusiasm for the children SLT 4, 1993).

You couldn't sit there and think about your shopping list or anything like that at the same time (PPIO 2, 1993).

The following comments which relate to Atkin practising her espoused need for certain psychological conditions for effective learning, are based largely on the evidence of the video-tapes of the workshops, as the participants were not asked specific questions about this dimension of Atkin's framework for effective teaching.

Evidence of *emotional involvement* could be seen in the sometimes lively discussions between participants, and their mostly willing participation in activities. There was an element of fun in many of the activities as shown in the amount of laughter evident during feedback and discussion sessions from these activities.

The state of *readiness to learn* of the participants, it could be argued, was already established because the teachers all attended the workshops voluntarily.

The participants' *freedom to choose, to experiment, to make mistakes, to set their own goals, and to work at their own pace*, was evident in part. While there was little *freedom to choose* learning experiences because Atkin had a pre-designed format for the six-day workshop, there were occasions, such as when activities, designed to illustrate the impact of different cognitive styles, had no defined outcome and allowed for freedom in structure. *Goal setting*, for participants to commit themselves to implementation, was not evident. Time allowed for this activity was minimal.

Working at their own pace was problematic for some participants. It could be argued that in a structure such as a professional development program where a set agenda is to be delivered in a set amount of time, it is inappropriate to expect participants to work at their own pace. The pace and timing of the delivery was

not comfortable for all participants. At the beginning of the second workshop comments were made about the excessive amount of information presented in the first. Participants felt that they had been overwhelmed and not able to put much into practice. Atkin responded first with empathy, then with a justification for the amount of information. She stated that:

You are on a steep learning curve and when you are on one of those, you are not sure of where you are heading, and it takes time to come out of that. One of the elements of change is that it's like being in quicksand and you can't reach the side of the bank. That's a good sign that you are really questioning, challenging and thinking things through. Without that you don't make major changes.

I make no apology for spending so much time on background theory because I don't believe I'll get real change without an understanding. Teachers will use a strategy without knowing where it fits in...[it] doesn't become internalised and become part of their practice. I know that teachers want answers about what they can do in the classroom, but unless it is grounded in [the] theory we did in the first workshop [it won't be used] (Transcript of workshop video-tape, 1992).

Two further comments indicate that two participants would have liked the pace to be a bit slower, though one thought that at times the pace was acceptable:

For me it might have been good to have five minutes to myself to think about it (PPIO 4, 1993).

Maybe [it needed to be] a little bit slower to allow us to reflect, but then again that may be just my style. There are times I'm happy to have things poured in. It is exhausting to concentrate but I kept looking forward to each new thing she was doing (SLT 1, 1993).

Appropriate mental processes of learning

In Chapter 2 it was shown that the process Atkin used to teach each concept followed the pattern described in her *Model of Integral Learning* (1992), one which is similar to Kolb's Experiential Learning Model (1984). That is, new ideas were introduced through personal experience in the form of activities to create the

experience, or through relating them to the learner's prior knowledge. Reflection and discussion followed experiences, relevant theory was provided and finally, application of new learning was discussed in relation to classroom practice. Additionally, Atkin used, as a basis for much of her teaching, the idea that people learn in a range of ways. Participants completed a Herrmann Brain Dominance Instrument (1989) prior to attendance and their cognitive processing preferences were consistently referred to in much of the teaching. Theories of adult learning indicate that adults prefer to learn through experiential learning and that their individual differences need to be taken into account (Wood & Thompson, 1980).

Fifteen of the sixteen participants, when asked: 'Does Atkin practise what she preaches?' indicated that there was a congruence between Atkin's espoused theories and her practice. One replied that she 'really couldn't answer that.' Thirteen referred to the attention she paid to differences in learning styles. General comments regarding her acknowledgment of their differences show their appreciation that Atkin 'structured different activities and different learning situations' to 'meet[s] the needs of a wide range of learners'; that she 'accepts us as being individuals', 'even with our differences', and that 'it's really good the way she handles each one of our personalities'. One teacher elaborated further:

We were catered for as whole brain learners. You didn't just sit there and listen...As a person and as a learner [you] had the chance to learn in a way that was most effective for you, by doing, or by listening, or by writing and now it's given...that understanding [of] how to develop whichever far side of the brain (*sic*) is lacking virtually. The only thing that disappointed me was that we never ever got to go on (PPIO 6, 1993).

One participant compared Atkin's acceptance of those in the workshop with a teacher's attitude to individual differences.

Because her work says we all have a range of learning styles then we are allowed to be different for a start, so there is no judgement about being different, whereas in class, a teacher might have judged kids who might have had big ideas or were artistic or aesthetic, as not being appropriate, but Julia accepted all that (SLT, 9, 1993).

Atkin's recognition of individual differences extended to the level of development and understanding, and the range of classes that the participants taught. Two teachers expressed the following opinions:

She isn't assuming that we are all at the same level as she is. She's worked from A to Z but she'll let us do the same, whereas a lot of people expect you to be at least at X (PPIO 1, 1993).

Certainly, in a group situation—teachers from different areas—primary teachers, secondary teachers, early childhood teachers...she is able to respond to them all in a sensitive way. Because she may have particular skills in one area of education...she is very good at accepting what we are saying as ECE teachers, and putting it into the scheme of things. The group is also able to listen and respond to each other in the same sort of positive way. The primaries don't feel threatened by the secondaries and vice versa, which is often the case in these sorts of situations when you've got a wide range of people in a workshop (SLT 7, 1993).

Practising her rhetoric included explaining concepts in a range of ways, according to two teachers:

She's willing to explain again the different ways. She's also willing to listen to people who don't understand her first explanation and rather than go over it again she'll explain it in a different way (SLT 3, 1992)

She explained everything in different ways and kept tying things together in doing different activities—you might think you were sure of something and you'd [get] something else and she's go back to it and you'd see how the two things interlinked in all the various ways (SLT 8, 1992).

One participant suspected that Atkin's teaching style was so varied that it was a source of some of his confusion.

She obviously did teach in different ways. I often wondered why, when I got out of the workshop, whether some of the confusion I had was a result of that (SLT 1, 1993).

In response to the question: 'Does Atkin practise what she preaches?' one participant made a broad reference to the fact that 'she is preaching her model of effective learning'. Another noticed that 'she goes to the big picture then she

goes back again then she gives examples'; another saw a range of ways in which Atkin demonstrated congruence and a fourth related her answer to Atkin's *Integral Learning* model. Two teachers elaborated:

She's really inspiring. I liked her teaching style; the way she presented herself in her persona...little things like her capacity to be able to learn names and remember them. It's just incredible and yet that's just a small way in which she demonstrates what she's actually on about. She meets a whole range of learners' needs...I'm really impressed with her (PPIO 3, 1993).

When she's working on the white board she's using all the different colours and that instantly draws your attention to it and she really is catering for me. In the first lesson we had the lesson plan catering for the four aspects of the brain. I feel that she does that very well. She's practicing what she preaches by taking us round the model (SLT 9, 1992).

Experiential learning was not mentioned by name, but many participants noted that Atkin consistently made connections with their own professional experience when 'she used our past experiences to draw on'. She also 'took our responses and used them'. In a typical observation one teacher stated that

she's very good at making you think back to things that are happening in the school; things that have happened in your class and to highlight things that you're done and you've reasonably sure of...and she's been able to clarify them (SLT 5, 1993).

Connecting with the teachers' experiences was demonstrated when Atkin showed that she 'talked our language'. Three teachers commented:

Very down to earth; she doesn't talk in jargon above you. I am totally able to understand her (SLT 3, 1993).

I like the way she approaches it—the language she uses. She speaks to us in a very professional way. She may be a very academic person but she is able to put it over in a way that we can all relate to our situations (SLT 7, 1992).

I really enjoy the way she presents...she doesn't put a gap between her as the teacher and you as the learner. You feel you're an equal. She makes it so practical for you (SLT 4, 1992).

One participant observed Atkin's apparent ability to make connection between the teachers' world and the content of her *Integral Learning* model, in saying that:

She went around from group to group [and] was able to take part in discussions which were not necessarily to do with her course, yet they all seemed to link back into it (SLT 10, 1992).

Categories emerging from data

Data which emerged from interviews with teachers related to three areas: (a) criticism of the workshops, (b) teachers' perceptions of Atkin's knowledge of her subject matter, and (c) teacher craft knowledge.

Criticism of the *Teaching for Effective Learning* workshops

While the majority of comments about the workshops were positive, a few were less so, and came largely from one participant. Two criticisms related to the cost.

Our biggest problem with the whole box and dice [is that] they are too expensive. We cannot afford [it]. I would have them here tomorrow doing my professional development program, but I can't afford it...if I take ten teachers off class there is another \$2000 dollars. I don't have it! I cannot do it! And the Department will not supply trained people to train us free, so we can only do what we can do privately. (SLT 1, 1993).

I think if the cost was a lot less it is good. But I think with the cost it is phenomenally expensive for schools to put all that money just into one person at one session when it is very difficult for us to pass that information onto other people (SLT 4, 1993).

The most critical participant complained not only about the cost, but also about lack of time for obtaining the skills he needed, Atkin's flexible teaching style which he reported as having confused him, and having to partake in activities. His complaints are as follows:

We haven't done any of the concept mapping...which I would have liked to have done, but to be perfectly honest with you, I don't believe I

understand that well enough myself...we didn't get a lot of time on the concept mapping and the actual tools (SLT 1, 1993).

I want the tools...and I don't have enough detail on the tools to use it accurately. I mean the idea is just second nature to me, but the tools are a whole different ball game and that's where I didn't feel I got enough out of the Atkin course. It was sort of half an hour on this, and then take off and a half an hour on that, and I needed to talk some of that through more, and to really...look at it because I don't understand the detail. I understood what she was trying to get at, but I didn't really understand the detail and that's why I find it uncomfortable to use a lot of it (SLT 1, 1993).

She does change modes; she delivers part of [the model] in one mode and part of it in another; she doesn't necessarily deliver the same thing in three different ways. She sometimes delivers some things in this way, some things in that way...I have a suspicion that she in fact used different techniques along the spectrum, so that if she was teaching an activity, she started off on one and then moved onto another, and moved onto another. I don't know how much reteaching went on each level. And I suspect that that might explain some of our confusion...I kept getting lost on some of the tools, and I'd get half a handle on it and then for some reason, although I was there, it was like, "I hear you talking but you are not coming in" (SLT 1, 1993).

A lot of what I did—there are parts that are really clear and parts that are really not. There are a lot activities that she did, that I don't think had a lot of relevance...I am not really into play acting stuff, role playing stuff. I just think that's a waste of time. I would rather sit there and get to understand what the hell I am on about theoretically. I'll come up with a way of play acting it out afterwards. To do it there is a just a waste of time to me. What's that doing? All that's giving you is an idea for role play. I don't think it does anything for your actual learning...I found myself wanting more meat and I didn't get enough of that (SLT 1, 1993).

The only other critical comment related to the *Inservice course notes* (1992b):

In the beginning it took a little while to take off 'cause it was really confusing with pages and numbers and putting bits together and seeing where things were going. Once you got into the groove [it was alright]; the beginning organisation left us all floundering a bit (SLT 4, 1993).

The inductive analysis of data concerning Atkin's personal style of presentation was derived from the two questions: 'What did you think of Atkin as a

presenter?’ and ‘Do you think she practised what she preached?’ Two categories emerged from the data, namely teachers perceptions of Atkin’s *knowledge of subject matter*, and her accessing their *craft knowledge*.

Teachers’ perceptions of Atkin’s knowledge of subject matter

There was no attempt by the researcher to verify the accuracy of Atkin’s theoretical knowledge of teaching and learning, beyond the literature review described in Chapter 3. The following comments are teachers’ perceptions of Atkin’s knowledge.

Many teachers commented on Atkin’s mastery of her subject matter, claiming that she is ‘definitely in charge’, ‘very much in charge’, or has a ‘great command’ of the information presented. In fact ‘she quite often would have set people back by her expert knowledge’ and ‘knows her subject matter so well she can backtrack to the relevant points so well’. Atkin must have made an impact on one teacher who said that ‘she’s one of the most impressive people I’ve found at any time who is talking about a particular subject who knows what she’s on about’, and another who claimed that Atkin ‘can draw on so many different areas of that information. Knows who said it and what book it’s in’. Teachers were impressed by what they perceived as Atkin’s practical experience of what she espoused, and this, they claimed, brought credibility. Three teachers commented as follows:

And what she is talking about she’s actually got evidence of...it’s not theory up here that she’s worked out on paper. She’s got so many practical experiences to back up what she was saying (PPIO 2, 1993).

I think that by bringing us back to children she’s working with and all age groups...and the experience of the different effective learning patterns, brings credibility (PPIO 4, 1993).

There’s a nice tension—she knows what she’s talking about she comes from a practitioners starting point, so what she has to say is sound and it works, so she’s got all that confidence and enthusiasm...at the same time she’s open minded to new stuff (PPIO 5, 1992).

One participant was impressed by Atkin's capacity to deliver her material 'off the cuff', saying that:

the way she can deliver without referring to heaps and heaps of notes, which I would have to...means that she's using these strategies. She's obviously done the background work, she's formalised it all on paper but she's gone beyond that in the way she delivers. She has total facility with her knowledge (PPIO 1, 1993).

Atkin's flexibility stemmed from her command of all aspects of the workshops, according to one participant:

I get the feeling that she has total control of the environment that she's working in—the group, the materials the resources the knowledge...she has such total facility with group management with the learning, the resources...she's able to be as flexible as possible...without being a controlling person she has control of the environment (PPIO 5, 1992).

The same teacher recognised that, while Atkin may appear to be an expert, few people in the workshops would have had the knowledge to challenge her, saying that:

She is in total control with her knowledge. It's a new field for many people, so therefore they are more willing to accept what she is saying. To challenge it you have to have a very good knowledge yourself. Even so, she was able to build in comments that people made that might have asked for clarification. There's no reason to be antagonistic (PPIO 5, 1992).

Teacher craft knowledge

Post-workshop interviews with the **pre- and post-interview and observation group**, revealed that five of the six teachers made (unsolicited) reference to the fact that Atkin 'told us what we already knew'. Following are their comments which illustrate this point:

Going there you're sort of sitting and nodding and nodding and you are agreeing with everything that she is saying and I am...thinking...I know this already—but it is just linking for you [and] thinking, "Well wow ... this is what I do, or this is why...it has worked so well, or why I do things..." The word is enlightening...It's like putting on a pair of shoes now. Walking in space shoes because you can access into everything but it was already there before...It's like science you know, lifted the veil off, it was there all the time but you just couldn't quite see through the blurry bits (PPIO 2, 1993).

I had always unknowingly used the experiential model, actually. It seemed to fit well with how I thought people participated better in workshops when I used that to when I didn't. But I didn't actually knowingly use that as a way of enhancing learning. It was more, "This is a good process. It works really well". I know it actively engages them but I wasn't so explicit in my understanding of why it was so effective. Julia's model makes explicit what teachers know intuitively...Her model builds on what good teachers do anyway and gives a rhyme and reason for what we do. She gives us extra strategies to enhance what we do (PPIO 3, 1993).

Well nothing in the workshop conflicted with things I have thought about or try [*sic*] to develop. I think it's helped me clarify things I knew before in the true spirit of constructivism...What I heard and saw wasn't different from the way I was operating but it's made it all more detailed and meaningful...It would be wonderful if everyone took it on board. I haven't found it any effort really...The more seminars I attend, and workshops, the more knowledge there seems to tie in to the model we have studied with Julia (PPIO 1, 1993).

Julia is giving a theory—a reason for what they [teachers] have been doing. It validates a lot of activities done in the classroom. She's brilliant (PPIO 6, 1993).

The most meaningful learnings that I've come across in the past ten years or so have been [with] the people who have been able to articulate what I've been thinking of...They're the things that stand out so clearly. There would be it, in a small phrase, and I'd think, "That's what I'd been trying to come up with". Julia does that. [She] can say it whereas you can think it and feel it but you can't quite explain (PPIO 4, 1993).

On being asked to expand on her answer, the first teacher, who had felt that she was 'walking in space shoes', further explained that, as a result of the workshop,

she was now acting more deliberately, and was able to articulate to others the nature of her teaching practice.

[Prior to Atkin's workshops] I would have deliberately done things because I thought then I am engaging children in all the different areas or the different quadrants or different experiences...I did some of it but I probably didn't know why I was doing it or if I was doing enough to engage all the processes. I now would do it deliberately. I have done it deliberately because I am thinking I am conscious of it. I...can now justify why I am doing [things], what I am doing, or I am doing that because...But now I am turning to the other side. Now I am trying to deliberately make sure that I am putting something in there...I know I have been doing things like engaging the children in each of the four ways but I wasn't conscious of me doing it. And if I am not doing enough in certain areas I will be really conscious and make sure I am now...I would say that it's clarified for me and it's a good time actually; I have been teaching four and five years now. It has clarified where I am at especially the children aspect for their learning...I am quite happy now to explain why I think I do something in a different way...because now you have a greater understanding of the learning, you know how it takes place and how we engage through them (PPIO 2, 1993).

A more deliberate focus in her emphasis on *relationships* was the intention of another teacher from this group. She was the only one to mention *relationships* post-workshops, though others had talked of it pre-workshops:

What sort of really clicked...is that the relationship side has always been really important to me, so I have made that connection there 'cause that fits with what I know about a good classroom. Unless there are good relationships then it doesn't really matter what model of teaching or learning you are using, it's not going to make too much difference. But it's about using some of [Atkin's] strategies...not only in the classroom, but when I am talking to all kids, or all people. It's trying to integrate that into the whole world, not just about teaching and learning. Next year...I'll start much more intensively and purposely on structuring things to build the relationships (PPIO 3, 1993).

Another said that in future she would have a greater understanding of thinking styles and be able to use that with her students:

Next year I think I'll have a much better way of working with students...in just finding out what each person can do, how they think and where to go

from there. I am a lot more purposeful about thinking about how people think (PPIO 4, 1993).

As a result of the unsolicited comments from this group of teachers, in the second interview with participants from the **short-term/long term interview group**, respondents were asked: 'Do you think Atkin is telling you what you already know?' All responses supported those of the previous group. Typically, participants described that, throughout the workshops, they thought: 'Yes, I know that', one adding 'but I'd never thought of it like that before'. Others referred to it as 'reinforcement' of things they had done 'intuitively' and that now Atkin 'gave me guidelines and gave me a framework and the background and theory'. One teacher who used Atkin's ideas in her professional development with other teachers summed up the views of most of the interviewed teachers: that Atkin had provided teachers with a language to describe their practice:

But you know, it has just been so valuable for me because I have been able to give teachers that theory, the basics, that they then can develop their own philosophy and help them justify and articulate what they're doing and why they're doing it (SLT 7, 1993).

Summary

An examination of the relationships that exist between the conceptual structure of Atkin's *Teaching for Effective Learning* workshops, the research literature on teaching and learning, workshop activities and methods of presentation provided an indepth understanding of the theory and practice of the workshops and those factors which may have led to its success with teachers and the possible role Atkin played in its popularity.

The document analysis revealed the conceptual structure of the workshops as being Atkin's Framework for Effective Teaching which consisted of three dimensions. However, an analysis of the video-tapes of the workshop and the publications, revealed that there was an imbalance in emphasis between the

three, with *appropriate mental processes* being the major focus. The *Inservice course notes* (1992b) reflected that imbalance, consisting almost entirely of notes and activities related to the third dimension.

Analysing Atkin's Framework proved a difficult task. Major problems related to the inconsistent use of language and diagrams. The first problem with language arose over the interwoven use of the terms 'teaching' and 'learning'. The title of a published monograph: *How Students Learn: A Framework for Effective Teaching, Part 1, Thinking—Critical for Learning* (1993) summarises the third dimension of Atkin's framework and also highlights a problem encountered with the language. As both teaching and learning are its focus, and the two concepts are used interchangeably, identifying its components and the relationship between them proved a difficult task. This confusion was further compounded by the interchangeable use of 'thinking', 'mental processes' and 'appropriate mental processes' and, in other contexts, 'effective' and 'appropriate'. There were no definitions or explanations for the discrepant use of language.

Atkin's terminology also proved problematic when the literature review was undertaken, for while she used many terms similar to those found in the literature on teaching and learning, their meanings were not always synonymous with those found in the literature, for example her use of terminology such as 'readiness to learn' is not used by researchers such as Bruner (1961) or Ausubel, Novak & Hanesian (1978).

A problem with the relationship between the diagrams also made analysis difficult. Teachers were presented with workshop notes that contained a number of diagrammatic models which described the third dimension (i.e., *appropriate mental processes*) of the Framework. With the possible exception of one, the model of memory, each diagram served the purpose for which it was developed, but the links between these diagrams were not always clear. For example the connection between Herrmann's model and the *Integral Learning* model is made explicit in Atkin's publications, and in the 1992 *Teaching for Effective Learning* workshops. However, the link between Atkin's *Integral Learning* model and

some of the 'mapped' strategies, such as mind mapping is not readily apparent, though the purpose of both is to ensure that four types of thinking are engaged. The connection between Herrmann's model and the model of human memory is shown in the diagram, but it is a complex and confusing image. There is no apparent link between the model of memory and the *Integral Learning* model. This confusion of models makes it difficult to construct a clear picture of how to enact the complete Framework in practice. If *vertical* transfer is to occur, teachers need to have access to material which contains theoretical constructs underpinning an innovation, clearly and concisely.

An examination of the relationships between the conceptual structure and the Framework in practice revealed that, on the whole, there was a congruence between theory and practice. Congruence existed between Atkin's personal presentation style and the dimensions of her Framework. In other words, she developed good *relationships*, she ensured that *psychological conditions* were present, and in teaching, used *appropriate mental processes*, particularly enacting her Atkin *Integral Learning* model. Congruence was not present however in the imbalance of the teaching of the three dimensions. The greater emphasis on *appropriate mental processes* could have been interpreted as having a greater significance.

Participants in this study clearly enjoyed the *Teaching for Effective Learning* workshops and were strongly motivated by some aspects of it, particularly Herrmann's Whole Brain Model (1989). It is interesting to speculate about why teachers were so attracted to Herrmann's model which is not embedded in any theoretical construct, but is simply a proposal of four different modes of brain function.

The popularity of the program could be attributed to Atkin's teaching ability and her attention to those aspects which the literature identified as important for adult learning. A common approach to professional development, the 'deficit' model (Eraut, 1987), takes little or no account of teachers' prior knowledge. The basic premise of this approach is that teachers are deficient in some way and

need improvement. Atkin appeared to use a 'growth' approach, in that all concepts taught were embedded in the teachers' prior knowledge, thus recognising its worth. Teachers seemed empowered by this, and it could have been a major reason for the popularity of the *Teaching for Effective Learning* workshops.

This study has been critical of the structure of Atkin's theoretical framework. However the fact remains that the majority of teachers were enthusiastic about the *Teaching for Effective Learning* workshops. One teacher, in her journal, showed why she appreciated Atkin's work and how she saw it in a broader context of education in the State.

I now think that Julia's model helps make explicit what good teachers do intuitively. By making the components of good practice explicit then we can make teaching more deliberate. This of course ties with the Department's commitment to constructivist theory and teachers playing a significant intervening role in their work. Julia's model and the Department's expectations are compatible. In fact I think Julia's model gives a practical framework for how school staffs can approach the Department guidelines (PPIO 3).

It would seem that the teachers were not aware of the inconsistencies in the use of language, or the unclear relationship between the diagrammatic models, but were inspired by Atkin's commitment to teaching and learning, her personal presentation style, and for some, the affirming recognition that she was describing what they knew they could do as teachers. Therefore, if one takes into account the fact that Atkin was regarded by participants as a positive role model and the workshops were practical, and linked to teachers' experience, it is even more surprising that transfer to the classroom was limited to *horizontal* domain. That is, they were typified by slight modifications to teachers' behaviour rather than by major changes to pedagogy. In the next chapter, the data relating to implementation are presented and indicates factors which influenced the transfer of skills and knowledge to the classrooms.

Chapter 6 reports the results of the impact of Atkin's inservice program, *Teaching for Effective Learning*, in terms of the transfer of skills and knowledge learned by the teachers in the workshops to the classrooms. This chapter addresses the second and third research questions.

Research Question 2:

What aspects of the *Teaching for Effective Learning* inservice program do teachers value and translate into classroom practice?

In answering Research Question 2, three key factors were taken into consideration, namely:

- The skills and knowledge taught by Atkin in the workshops .
- The transfer of skills and knowledge learned in the workshops, as displayed in teaching behaviour and as described from teachers' own experience.

Research Question 3

Which factors help or hinder the transfer of skills and knowledge learned in the inservice program?

Skills and knowledge presented in the *Teaching for Effective Learning* workshops

As part of the examination of Atkin's *Teaching for Effective Learning* inservice program, the researcher identified a series of assertions, presented by Atkin, which stemmed from a range of theoretical premises, namely humanistic and cognitive psychology, theories of brain function, experiential learning, and constructivism. It was assumed that any strategy, taught in the workshops and intended for classroom use, would relate in some way to Atkin's theoretical assumptions, as shown in the assertions she made in the workshops.

A summary is presented in Table 2 of the major assertions presented by Atkin, the theoretical premise on which each is based (as identified in Chapter 2, entitled *Review of literature relevant to Atkin's Framework for Effective Teaching*), the strategies taught in the workshop as they relate to the assertions, level of transfer shown in data gathered, and the type of transfer (that is, horizontal or vertical) identified. This chapter expands on the data as shown in Table 2, and provides examples from interviews, observation notes, teacher journals and questionnaires.

The following reporting of the data is organised in two ways. First, the assertions or ideas identified by the researcher as having been presented by Atkin are shown as sub-headings in italics, along with reported or observed use of the idea. Second, the strategies observed or reported as having been used in the classroom, are categorised in terms of whether or not they were transferred, in Joyce & Showers' (1983) terms, that is, *horizontally* or *vertically*.

The rationale for structuring the data in this manner was that many of the participants described the ideas they had gained from the workshops without necessarily demonstrating how those ideas translated into practice. The relationship between rhetoric and practice was considered a key issue in investigating implementation. Strategy use, on the other hand, was supported by observation, quotations from interviews, or examples from journals or student work.

Table 2

The relationship between the conceptual structure of the *Teaching for Effective Learning* workshops, the activities taught, and implementation

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CONCEPTUAL STRUCTURE/ ASSERTIONS PRESENTED IN WORKSHOPS BY ATKIN (synthesised by researcher)	THEORETICAL SUPPORT & BACKGROUND	STRATEGIES TAUGHT IN WORKSHOPS	REPORTED OR OBSERVED USE	TYPES OF TRANSFER IDENTIFIED
1. Effective teaching involves good relationships between teachers and students	Humanistic psychology	None taught		
2. Effective teaching involves ensuring that 'psychological conditions characteristic of effective learning' (Atkin, 1994), are present	Cognitive psychology	<ul style="list-style-type: none"> Checklist to evaluate psychological conditions for learning in participants' schools 	None	
3. Effective teaching involves engaging appropriate mental processes	Theories of brain function - (Herrmann's Whole Brain Model, 1989) - Edwards (1979)	<ul style="list-style-type: none"> Using knowledge of different processing modes to identify preferred modes of students Using knowledge of different processing modes to structure groups 	None	
3.1 Understanding the cognitive process of memory, and how the brain works will lead teachers to a better understanding of effective mental processes of learning			None	
3.2 Herrmann (1989) identified four types of cognitive processes (thinking style) preferences. Learners may prefer to process information in one or more of these processing styles, and this could have implications for designing learning experiences			Frequent (29 cases)	
3.3 Effective learners are "whole brain" learners who engage their own appropriate mental processes for given tasks		<ul style="list-style-type: none"> Drawing strategies (Edwards, 1979) <ul style="list-style-type: none"> - analogue drawing - upside-down drawing - contour drawing Worksheet to assess "whole brain" teaching Strategies to 'promote processing in each of the four main modes' to encourage "whole brain" learning. <ul style="list-style-type: none"> - Predict-observe-explain - Double drawing - Gowin's Vee - Co-operative logic - Questioning skills - Use of analogy or metaphor - De Bono strategies <ul style="list-style-type: none"> PMI Six Thinking Hats - Visualisation and guided imagery - Mind maps - Concept maps 	Minimal (2 case)	
3.4 Edwards' (1979, 1986) methods of teaching people 'to draw more effectively' provides an example of accessing the appropriate processing mode			None Minimal (1 case) Minimal (1 case)	
3.5 Teachers should plan for "whole brain" learning by using a range of strategies to engage all cognitive processing (thinking) styles			Minimal (1 case) Minimal (3 cases) None None None None Minimal (1 case) Minimal (1 case) Minimal (2 cases) Minimal (2 cases) Frequent (17 cases) Frequent (15 cases) Minimal (2 cases)	
3.6 Effective/meaningful learning would involve engaging personal relevance; grasping in the mind's eye/reflection, language, definitions and rules; and procedural knowledge in the application of new knowledge and skills. This 'integration of many ways of knowing' describes Atkin's Integral Learning model (1992)	Eclectic theoretical premise: Cognitive psychology, theories of brain functioning, experiential learning, constructivism	Atkin's <i>Integral Learning</i> model (1992)	Minimal (1 case)	Horizontal Horizontal Horizontal - some reported attempt at vertical Vertical Horizontal Horizontal Horizontal Horizontal - some reported attempts at vertical

It should be noted that there are two possible explanations for “None” as a description of reported or observed use of an idea or transfer of a strategy. First, when the behaviour was observed or reported as having been used prior to attendance at the *Teaching for Effective Learning* inservice workshops. This could be said to relate mostly to the first two assertions addressed under the heading below: **Assertions identified as presented in the inservice workshops.** Second, the description ‘None’ was used when ideas and strategies, learned in the workshops, were not implemented or only partially implemented.

NOTE: As noted in Chapter 5, a system of codes has been adopted to show the source of data from interviews and questionnaires. These codes are as follows:

- PPIO pre- and post-interview and observation groups (numbered 1-6)
- SLT short-term/long-term interview (numbered 1-10)
- Q questionnaire

Assertions identified as presented in the inservice program

1. *Effective teaching involves good relationship between teachers and students*

A typical example of an idea which could not be claimed as having been learned in the *Teaching for Effective Learning* workshops, was the issue of relationships between teachers and their students. Teachers were not asked specific questions regarding the significance of their relationships with students, but this facet of teaching was observed in one group of the total sample (pre-workshop/post-workshop interviews and observations group). Of the six teachers observed only one did not display the typical behaviour of a teacher with good relationships with students. Good relationships were noted through non-verbal language (that is, smiling, reflective listening, praising, touching where appropriate) and language such as:

- ‘I really like the way...’
- ‘Rachael can go first because she has done so well in...’
- ‘No, don’t go. It is important. You were waiting.’
- ‘You seem tired. Would it help if...’

Non-verbally these teachers showed positive regard through the displays of student work, the physical contact, smiles, jokes and listening skills. Two teachers were observed being hugged by their students, one of whom frequently addressed her prep/one students as 'gorgeous' and 'love'. This teacher also demonstrated her regard for the students by consulting them when a classroom problem needed solving. It was the students' ideas which prevailed in this observed incident. A grade 3/4 teacher was not heard or observed to be fulsome in her use of verbal praise, but indicated her valuing of students through class displays, attentive listening and rapid turn around of marking. One wall in her classroom, entitled the 'Welcome Wall', displayed photographs of all her students in the room. Their work was presented publicly with care and each class member had work displayed in one form or another.

It is not possible to attribute the good relationships the majority of this group of teachers had with their students to their attendance at the Atkin workshops. While two in the **pre-workshop/post-workshop interviews and observations** group were not observed prior to attendance at the first workshop, there was no discernible change of behaviour throughout the year in any of the teachers' behaviour towards their pupils. Five of the six teachers in this group mentioned human relationships as priorities in their teaching when asked to describe their ideas behind their teaching practice. Typical statements from their first interview are as follows:

My philosophy...is to do the best I can to develop each student...My belief centres around making each individual feel they have a place in the group...I think skills you develop [in relationships] really help teaching...it seems to me that it all hinges on how the individuals relate. And that's where things break down (PPOI 1, 1993).

My belief is that the relationship that you establish with your class, or the relationship that you establish with individuals within your class is of paramount importance. And our role is not just one of imparting knowledge to fill up empty vessels...as we are helping develop a whole person, and that whole person hinges on the self-image everyone has of themselves. And as a significant other in a child's life you are helping create that self image. And I don't think that people can leave that to chance any more. I don't feel that we've got a right to just blunder in and do whatever we do without having any idea what the effects are. So developing self-concepts and self-image is of

vital importance, and to do that you've got to be aware as a teacher...of what influences you can have, and plan systematically and purposefully for that development to happen...You should be looking at children as individuals...and people aren't aware of how learning can be impacted by the self-image, self-esteem, self-worth and self-concept of children. What will they do? They will withdraw from learning because they don't want to risk their self-esteem by failing (PPOI 4, 1993).

A part-time teacher articulated her views on relationships through an expressed frustration at not being able to form those relationships which other teachers could. She saw relationships as 'the foundation of all teaching and learning'.

While the above examples indicate teachers views and researcher's observations about relationships between teacher and students, it is doubtful that they are examples of 'unconditional love' (Atkin, 1994); in fact it is doubted that this could be ascertained without extensive observation of a teacher. No teacher in the **short-term/long-term interview** or **questionnaire** groups mentioned the issue of relationships in teaching, nor did they refer to any of Atkin's espoused 'psychological conditions' for learning (that is, motivation, sense of achievement, a degree of freedom to choose, readiness to learn or emotional involvement).

2. Effective teaching involves ensuring that 'psychological conditions characteristic of effective learning' are present

Teachers were not asked specific questions regarding Atkin's espoused psychological conditions for learning, nor was there any attempt to identify them in the pre- and post-observation and interview group. No attempt was made to ascertain the psychological conditions during observations, as time did not permit what would have required extensive observation to provide meaningful data. Additionally, while teachers were observed to exhibit behaviour which could be claimed to be ensuring that psychological conditions were present (for example, they did motivate their students at various times), these behaviours could not be attributed to the *Teaching for Effective Learning* workshops, as the behaviour remained the same throughout the year.

3. Effective teaching involves engaging appropriate mental processes

No teacher articulated the assertion as it is presented under the heading above, however this belief underpinned much of the content of the six days of the *Teaching for Effective Learning* workshops, and Atkin provided many related assertions and strategies through which she explained and illustrated it. Teachers undertook a range of activities in the workshops to develop an understanding of the concept of engaging appropriate mental processes. Data indicates that most teachers understood one or more of the related assertions, without necessarily indicating an understanding of the overall idea. The related assertions, as shown in Table 2, are therefore described separately below, along with its observed or reported use.

3.1. Understanding the cognitive process of memory, and how the brain works will lead teachers to a better understanding of effective mental processes of learning

One teacher claimed that the workshop ‘reinforced [the] importance of brain structure in reference to how some children learn’, and one referred to the cognitive processes of memory per se in claiming that the workshops provided ‘ways of improving memory through visualisation, chunking, etc.’. In fact, as will be shown later, visualisation, taught by Atkin to enhance long-term memory, was used by the majority of participants. A similar number referred to brain functioning and this too will be later expanded in terms of frequently used ideas.

3.2 Herrmann (1989) identified four types of cognitive processes (thinking style) preferences. Learners may prefer to process information in one or more of these processing styles, and this could have implications for designing learning experiences

Data indicated that this assertion was popularly adopted by the majority of participants in the workshops. Twenty nine of the thirty one teachers in this study claimed to use information regarding different ways of thinking and learning as a means of understanding themselves as learners, their students as learners, other staff members, and how that awareness may influence their teaching. Descriptions

and language used to describe this application to their practice varied. Some referred directly to the four information processing modes of thinking, based on Herrmann's Whole Brain Model (1989), others to 'learning styles', or to 'left brain - right brain' characteristics, though some responses indicate a simplistic understanding of the idea, or used inaccurate terminology such as talking of 'four parts of the brain'.

Typical of the statements from the questionnaires, in response to the questions: 'What were the main ideas you took away from the workshops?', and 'What were you able to implement?', the following comments indicated a heightened awareness of thinking styles:

I have a greater understanding of learning. You know how it takes place and how we engage [children] through them.

People learn in different ways and we need to maximise on potential—learning style awareness.

Why different people think in different ways—four parts of the brain (*sic*).

People learn in different ways.

Different people do have different learning styles (emphasis in original).

Further responses from the questionnaire went beyond reporting simple awareness and saw the implications for teaching, in making such comments as:

I feel a lot clearer about learning styles and how to encourage people to be more flexible.

People have different brain dominances. We need to respect and cater for all children and adults.

[I have a] better understanding of myself as a teacher and learner...has to a small extent changed some expectations of students. I more readily allow for different responses from children seeing this as the outcome of their differing personalities.

There are several different ways to get a correct answer. All ways are valid in the mind of the individual. The same would go for spelling.

Different ways of grouping children and the effect of this on performance.

Must present materials/tasks in range of ways to facilitate learning.

Teaching to preferred modes of learning—left and right brain.

Information to cater for students' different learning—not just ways of presentation but actual content and the introduction of topics.

Presentation styles that either support existing preferred styles or alternatively to force into non-preferred styles.

When planning for teaching this (different learning styles) has major implications.

Case for rhythmic learning styles, e.g. Chanting.

We need a variety of teaching methods was reinforced.

Importance of physicalising.

Try to plan for whole brain learning.

While acknowledging peoples' preferences in learning [we] must also encourage a whole brain approach so that the learner is in charge of own learning.

Global thinkers may not be catered for in traditional classrooms—we value more highly sequential styles and outcomes.

How children fail to learn to read and spell.

Teachers from the two interview groups also saw the significance of Herrmann's Model (1989) for teaching, making such statements as:

I'm looking at a child and saying you're predominantly in upper right...or you've gone into upper left...you can't make those kind of judgements and say about a child, "You are upper right", because that's not necessarily the idea of the model, is it? But that's the starting point for me, just thinking about how you can get...an upper right to move over to the left (PPIO 6, 1993).

It certainly helps in your understanding, going back to the looking at the four quadrants, the Herrmann model etc. Certainly you are drawing on that all the time, just when you are looking at people and thinking about people and

children as well, adults and children how to go about doing things and also seeing where they are coming from (SLT 9, 1993).

Because I feel with all the new impetus coming in with Literacy, teachers need to have that understanding that all children are different. And they all have a different learning style and all methods of teaching whether it be flashcards, snap-shotting of words, rote learning, whatever. Sometimes [a strategy] suits a particular child and that's fine, if that is the way the child is going to learn (SLT 7, 1993).

Some teachers claimed to apply the information of different learning styles to understanding other staff members, through observation, or in professional development sessions with their staff. For example,

I found it really beneficial with staff members if they [are] say particularly left brained and I am right brained, for example. And you have a bit of a stir at one another. If someone has got a bit of background like you, you can have a bit of a dig and that. But it also helps you see where they are coming from and maybe why their ideas and yours seem a little bit different at times and that has been really good (SLT 9, 1993).

I have used it with lots of staff as the basis of their theory, and they found it so interesting and they just want me to come back and back again... Personally they get an understanding about themselves, about the staff that they are working with...and then bring that understanding to the children, and then help the children themselves understand how they learn and so that they become effective in their own learning. And you become much more effective in your teaching (SLT 7, 1993).

Something that I am in the process of doing now, is to get together a group of people that I consider come to things from a different mode if you like, more left brains so as I can get a more rounder perspective of initiative...and that provides me with a deeper insight into the situation...I have got one person on my staff who is a very left brain...probably in the A sector strongly...so that's really good and I can go to that person...Through Julia's workshop I think I have also been able to clarify my own particular modes of learning that I use the most. And by that I don't feel guilty now about saying, "No I need time to go away and read this because I feel that I am a very visual learner". I need to see things and to hear things in senior staff meetings and then to...make a comment. I don't feel that I can do [something] justice, so I don't feel guilty now about saying I need to go away and read [something] first...and then I can make my own pictures...That has given me a certain

strength...to say that, but I would not have said that before but I don't know if that is just maturity or what it is (SLT 10, 1993)."

A variation on the awareness of learning styles came from three teachers who adopted the concept of the visual, auditory and kinaesthetic learners— taught by Atkin in relation to short term memory. These teachers stated that:

I do use the model, I think, quite a bit in the sense that I will assess a child very much to where it is ... whether it is kinaesthetic, audio or otherwise and this has helped me a lot in assessment of children within the classroom. Not being a class teacher I cannot use the whole model but I use it...with one or two children. [I have] picked up problems which I think has come directly from that course I did with Julia. I think it was clarified. Because of the work I do, we usually have to work from where they are coming from. But I think that I have picked up...that they are children that are having problems within the class. And I have watched them having problems or otherwise and I have gone to a class teacher and said, "I would suggest that it might help doing this that and the other with this particular child"...I found that I have picked up things and being able to say, "Yes, that is a specific problem in this area" having been to her workshop (SLT 9, 1993).

And I do sometimes notice kids who I think, "Ah yes that person probably is more picture-orientated but I don't think I have ever actually analysed the kids that we have. I think I might have to start to (SLT 4, 1993).

I was more aware of looking at children's learning modes [as a result of the workshops]...the way in which [the students] learned...for example with one child - he was obviously a kinaesthetic learner, and with our phys ed teacher I was able to perhaps provide a few more experiences for him and I guess you know Julia made me aware of those issues, that maybe I had not taken in account before...When I am looking at teachers planning, and the work that they are doing for children, I am looking at first of all to see how well they are using the three modes of learning to provide experiences for children. For example, visual...Sometimes one teacher was doing visual work, but not enough—a lot of oral work but not necessarily a lot of visual work. So I was...able to talk to her about that aspect. Providing experiences in the four areas [a reference to Herrmann's Whole Brain model], I have not done as well yet...But it is something that I have kept up...and I think it is something that I will use as I become more familiar with the surroundings and the children but [the workshop] certainly has made me very aware of providing for the whole child (SLT 10, 1993).

3.3. Effective learners are 'whole brain' learners who engage their own appropriate mental processes for given tasks

No teacher referred to the idea of 'effective learners' unless specifically asked. One (grade 1) teacher only mentioned deliberate use of teaching strategies to develop what she described as 'powerful' learners. She commented:

What I am saying to myself is, "Let me build in as many learning experiences into this one thing to make it really powerful", and I am saying to the children more often, "Use all your power". So we have got spelling work, "Use all your powers to be a powerful learner...so use your eyes, use your ears, use your voice and you are using your mind...do it in the air and use your arms and your body and you are a powerful learner". It really seems to appeal to them, the word "powerful". You could see the little sparkle in their eyes (PPIO 1, 1993).

On being asked if she understood Atkin's ideas of an effective learner, one teacher responded by giving a vague description of the Atkin *Integral Learning* model. She responded:

The cycle of how we learn, and how we select and rehearse back over what we have done, and how we maintain it an [Atkin] idea of there being those students who learn in spite of you anyway, regardless of what you do (PPIO 4, 1993).

3.4. Edwards' (1979, 1986) methods of teaching people 'to draw more effectively' (Atkin, 1993) provides an example of accessing the appropriate processing mode

No teachers expressed an understanding of Atkin's use of Edwards' (1979) work as a means of engaging appropriate mental processes, but one teacher from the pre-post interview, observation group used Edwards' drawing activities extensively. This will be described later under the heading 'Types of transfer'. No teachers who responded to the questionnaire referred to drawing activities, and the only other reference to drawing was in the context of visualisation, which will also be dealt with under the heading of 'Types of transfer'.

3.5. Teachers should plan for “whole brain” learning, by using a range of strategies to engage all cognitive processing (thinking) styles

While many teachers reported using strategies, new to them and learned in Atkin's inservice workshops, only three teachers (of thirty one) talked of the importance of structuring their planning to ensure that the students could engage Herrmann's (1989) identified four ways of thinking. One of these teachers used the worksheet provided by Atkin while planning for 'whole brain' learning. This will be examined further, along with other examples of horizontal transfer of strategies to the classroom. The second teacher to have the awareness of planning for 'whole brain' learning was observed, over a ten day period, teaching a unit of work on 'Worms'. In the ten days, students were observed exploring all aspects of worms through at least six processes, which this teacher reported as having planned to ensure four ways of thinking. It should be noted that none of the processes used to teach this unit of work were those taught in the workshop. So this teacher was using the idea of 'whole brain' learning only. In other words, she ensured in Herrmann's (1989) terms, that she was engaging the following ways of thinking in the children: logical, analytical; detailed, sequential; interpersonal, feeling based; holistic, synthesising.

A third teacher reported that 'teachers/educators need to present material/tasks in a range of ways to facilitate learning', and 'Although we acknowledge peoples' preferences in learning, we also need to encourage a whole brain approach so that the learner is in charge of [their] own learning'. This teacher did not specify how this belief was put into practice.

Many teachers reported using strategies ostensibly to engage a range of ways of thinking. These will be described under the heading, 'Implementation of strategies'.

3.6. Effective/meaningful learning would involve engaging personal relevance; grasping in the mind's eye/reflection, language, definitions and rules; and procedural knowledge in the application of new knowledge and skills. This 'integration of many ways of knowing' describes Atkin's Integral Learning model (1992).

Only one teacher referred to the Atkin *Integral Learning* model (though not by name) from the **questionnaire** group. when asked, "What were the main ideas which you took away from the workshop (i.e., new ideas and reinforcements)?" the teacher responded: 'The model—experience, theory, reflection'. It should be noted that this teacher has omitted 'application'. One teacher talked of teaching in the sense described above which derives from Kolb's Experiential Learning Model (1984). To her it was a case of reinforcing the use of Kolb's model, which she claimed to have used as a base for all her planning, particularly in the professional work she did with her staff.

In the short-term/long-term interviews, and pre- and post-interview and observation groups, all teachers (N=16) were asked, after completing the workshops, if they understood the concept of Atkin's *Integral Learning* model. After allowing for 'wait time' and a preliminary response, participants were shown Atkin's diagrammatic version of the model to prompt their memory. The majority of initial responses indicated that teachers did not clearly understand the concept sufficiently to explain to others. Typical comments were:

I don't think I could explain it yet to a parent. I think I probably need to sit down and really put it down and formalise it (PPIO 5, 1993).

I think I would have to go back and read it to clarify in my mind...I could probably [explain it] in quite a short space of time (PPIO 1, 1993).

Yes, I understand it—it's about whole brain learning (PPIO 2, 1993).

I haven't got the full picture (PPIO 4, 1993).

To cover all the learning areas we need to go through this sort of range of experiences (SLT 2, 1993).

Well she is saying that first of all you have your visual image and your grasp, you have your understanding in your experiences and from that understanding you come down here, and you do, and you apply. So it's really the constructivist approach...So then you make new understandings and you gain new knowledge and you use that with new experiences coming in and you use it and then you redefine them (SLT 10, 1993).

I would have to say there's...four areas, but I wouldn't be confident at talking about each area (SLT 8, 1993).

I would be able to explain to [parents]...that learning needs to be integrated and needs to address all the four thinking styles (SLT 4, 1993).

It just tells you what the four different sections of the brain are, isn't it? And it can move from one to the other mode of operating (PPIO 6, 1993).

I know what it is and could probably have a go at explaining it but I doubt whether I could do it very well...Well I can sum it up in the sense of...the diagram and of the four quadrants of the diagram, and I can explain to people what the four quadrants are all about, and how they link. So I can do that in terms of...giving people an overview of what processing is all about, and how different people have different preferences and how that works...I deliberately don't spend a lot of time talking to people about that because I believe they need a lot of time, or none at all, to make any sense of it (SLT 1, 1993).

On being shown the diagrammatic version of the Atkin *Integral Learning* model, this teacher said that

The process, as I understand it, means...that most people need direct experience on which to build an understanding from which to draw detail for which they can apply to new situations (SLT 1, 1993).

When others were shown a diagrammatic version of the Atkin *Integral Learning* model, typical responses tended to involve reading the wording on it. For example,

Start with experience and you take it through and then you look at your experience, reflect on it and then you come back and make alterations and adaptations...Some people have to come right from the doing, the experience to start off with. Some people go straight to their left (SLT 9, 1993).

You start with experience and move from there (SLT 6, 1993).

One teacher, on being asked to explain the *Integral Learning* model, replied: 'That's a tough one. Because we just got so much, until you go back into your folder and go back through and say, "Oh yes, that's right, that was there" '. However, on being shown the diagram of the model, she said:

I think—the cycle, you could work through the engaging, the experiencing, you're reflecting and you're processing and your experiencing. It just keeps flowing, developing your own strategies (SLT 3, 1993).

On being shown the *Integral Learning* model diagram, one teacher said: 'I thought that was Kolb's Model' (PPIO 3, 1993).

No teachers used the term 'meaningful learning' in association with Atkin's *Integral Learning* model.

The transfer of skills and knowledge

In a diagram entitled 'Teaching/Learning Strategies to Engage Different Processing Modes', Atkin (1993:18) 'mapped some teaching and learning strategies onto Herrmann's whole brain model to indicate which strategies promote processing in each of the four main modes'. This diagram is shown as Figure 2 in Appendix 1. As Atkin (1993) herself says, 'most of these strategies are not "new" to teachers. What is new is the understanding which can guide the deliberate use of these strategies to stimulate all of our ways of knowing to ensure integral learning' (p. 18).

It should be noted that while the strategies were taught to engage a range of different processing modes, and were related, by Atkin, to theories of brain function, most are derived from cognitive psychology. Approximately thirty nine strategies are listed.

Strategies taught and/or experienced in the workshops, which could have been implemented in classrooms are listed in Table 3, and coded in the table as follows:

CODED HEADING	MEANING
• 'Mapped'	for those strategies 'mapped' onto Herrmann's Whole Brain Model
• Quadrant A, B, C or D	represents the processing mode shown in Herrmann's Whole Brain Model, which Atkin deemed the strategy would 'promote'
• 'Not mapped'	if it did not appear on the map
• 'Nudging'	describes those strategies which Atkin deemed to 'nudge' thinking, but which were not mapped onto Herrmann's Whole Brain Model
• 'Demonstrated,' 'Experienced' or 'Discussed'	describes the method of teaching

Table 3: Strategies 'mapped' or 'not mapped' on to Herrmann's Whole Brain Model; the quadrant Atkin deemed it to 'promote' and methods by which they were taught

Strategy used in workshop	Map-ped	Quad-rant	Not mapped	Nudg-ing	Demon-strated	Experi-enced	Discus-sed
Predict-observe-explain				√	√		√
Gowin's Vee	√	A			√		√
Questioning skills				v		√	√
Use of analogy	√	D			√	√	√
Co-operative logic			√			√	√
Checklist to evaluate psychological conditions in schools			√				
Structuring groups, using knowledge of four cognitive processing styles			√			√	√
Drawing strategies: - Upside down, contour and analogue drawing (Edwards, 1979)			√			√	√
- Double drawing			√			√	√
Worksheets/template for planning 'whole brain' ~ teaching		B				√	√
De Bono strategies: - PMI - Six Thinking Hats			√ √			√ √	√ √
Visualisation	√	A,B,C D			√	√	√
Guided imagery	√	A,B,C D			√	√	√
Mind maps	√	A,D			√	√	√
Concept maps	√	A,D			√	√	√

Analysis of data from all groups, that is observation, interview and questionnaire data will be reported in terms of 'no' 'minimally' or 'frequently' reported or observed transfer of the above strategies. Those identified as 'minimally' or 'frequently' reported or transferred are further analysed according to the method of transfer (that is, horizontal or vertical). For each strategy, reference will be made to Atkin's description/definition, as well as to any examples presented to teachers in the workshops.

No reported or observed transfer:

Of the strategies presented in the workshops, those not reported or observed were:

- *Predict-observe-explain*
- *Gowin's Vee* (Novak & Gowin, 1984)
- *Checklist to evaluate psychological conditions for learning in participants' schools*
- *Co-operative logic*
- *Use of metaphor or analogy*

Types of transfer: *Horizontal* and *vertical* transfer

Horizontal transfer

It would appear, from the data gathered, that the dominant method of implementation in the classroom was through horizontal transfer. Data were analysed to identify evidence that teachers had used this form of transfer, that is: 'the condition in which a skill can be shifted directly from the training situation in order to solve problems...with little additional learning' (Joyce & Showers, 1983:5–6). It was assumed that evidence of horizontal transfer would make reference to some aspects of the workshop which was of a practical nature or which presented an idea which could be tried out readily in the classroom. The dominant aspects transferred in this manner were the teaching strategies of visualisation and mind mapping. Part of the reason for this fits with the notion that teachers prefer "hands on" techniques rather than theoretical concepts and application to practice. The most commonly adopted idea from the workshops was the differences in thinking and learning styles, and how they might be recognised and catering for a range of learners in the classroom.

Minimally reported or observed horizontal transfer

Of the strategies presented in the workshops, those found to be minimally used were:

- *Use of worksheet to plan for 'whole brain' learning*
- *De Bono strategies* PMI
Six Thinking Hats (de Bono, 1985)
- *Drawing strategies* (Edwards, 1979)
- *Structuring groups using knowledge of different thinking styles*

Worksheet to plan for 'whole brain' learning: There were two versions of this worksheet in the *Inservice course notes* (1992b). The first, entitled: 'Planning for whole brain learning', the second: 'Template for mapping teaching strategies'. One of the thirty one participants reported using the worksheet with her entire staff, with the principal's support, to encourage 'whole brain' planning with all teachers. It is interesting to note that while this teacher found the process easy and was able to comfortably adapt her own teaching to cater for all ways of thinking, she reported that some of the staff found teaching in new ways extremely uncomfortable. Examples of teachers' planning using this format can be seen in Appendix 8.

De Bono strategies (PMI, Six Thinking Hats): Plus, Minus Interesting (PMI), according to Atkin, is an activity which encourages reflection (Source: Transcript of video-tape of *Teaching for Effective Learning* workshop, March, 1992). It involves evaluating any process in terms of three questions: What was positive (Plus)? What was negative (Minus)? and what was Interesting? De Bono's Six Thinking Hats involves a working group of six, each wearing a different 'hat', designated as Red (Feelings), Yellow (Strengths), Black (Weaknesses), Green (New ideas), White (Information) and Blue (Thinking about thinking). The group discusses an issue or solves a problem with each member contributing from the point of view of their 'hat'. According to Atkin, this is a useful scaffold if group work breaks down (Source: Transcript of video-tape of *Teaching for Effective Learning* workshop, March, 1992). In the workshop, Atkin compared De Bono's six styles of thinking with Herrmann's four thinking modes.

Two teachers reported using these strategies. One, from the questionnaire, commented that she or he had 'implemented to a small degree' the Six Thinking Hats, the other claimed to have 'done PMI and Six Thinking Hats before, but haven't used them for a while' (SLT 4, 1993).

Drawing strategies

(a) Upside-down, contour and analogue drawing (Edwards, 1979).

Upside down drawing, a process of copying a picture which has been inverted, is according to Edwards (1979:53), a means of 'forcing the cognitive shift from the dominant left-hemisphere mode to the subdominant right-hemisphere mode'. Contour drawing has a similar objective. This involves staring at the contour of an object while drawing it, facing away from the drawing, 'without being able to see what you are drawing' (Edwards, 1979:85).

One teacher (grade 2) said that

we did a lot of work from upside-down pictures like Julia showed us, and that was very interesting because we were doing them once a week. Before they started doing [upside-down drawings] they did a sketch of something in the room and then we did these for two or three weeks and they sketched the same item again, and the difference was really terrific (PPIO 5, 1993).

None of the teachers reported or were observed using analogue drawing. One grade 3/4 teacher had established a learning centre in which the children were instructed to undertake contour drawing—the use of this exercise being a direct result of Atkin's workshop. The teacher requested that the researcher supervise five children at a time for that activity.

Many teachers reported using drawing strategies in relation to visualisation, and these will be included later in the chapter under that heading.

(b) Double drawing. This is a strategy which Atkin claimed, in the 1992 *Teaching for Effective Learning* workshops, would allow participants to understand first-hand how people can be similar and different in their thinking styles. This strategy

involved two steps. First, two people who had similar thinking styles, identified by the Herrmann Brain Dominance Index (HBDI), each with a coloured pencil, took turns to draw lines of a simple picture. Second, the pairs comprised people with dissimilar thinking styles, to undertake a similar drawing. There was no reported or observed use of this strategy by participants.

Structuring student working groups, using knowledge of different thinking styles.

According to Atkin (Transcripts of workshop video-tapes, 1992), a 'whole brain' group, comprising members with each of the four preferred thinking style, identified by Herrmann (1989), can provide 'richness' to problem solving. However unless people understand the strengths of individuals and value them, group dynamics can interfere with the group's potential (Transcripts of workshop video-tapes, 1992).

There were two teacher reported uses of this strategy, but there is no supporting data to confirm the reports.

Frequently reported or observed horizontal transfer

Of the strategies presented in the workshops, those frequently used were:

- *Visualisation*
- *Guided imagery/visualisation*
- *Mind maps*

Visualisation. A major feature of Atkin's workshops concerned visualisation, taught as a means of 'engaging appropriate mental process' of students, for skill development such as spelling, drawing or writing. This appeared to be a strategy that was transferred readily by teachers to their own practice. Two statements in Atkin's *Inservice course notes* (1992b) provide her rationale for teaching visualisation strategies in the workshops:

If someone asks you to create a visual image she/he means to picture the thing in your mind's eye. Visual images are a powerful aid to working memory and should be used both mentally and on paper as often as possible to aid clear thinking and problem solving. Being able to see relationships

between things and to be able to see and manipulate objects in the mind's eye is a skill which can be used in various ways.

Visualisation, as a mental strategy for learning, is one of the most neglected forms of thinking and yet it is one of the most powerful forms of thinking for understanding and to enhance transferring information from working memory to long term memory (*Inservice course notes*, 1992b).

Atkin suggested that teachers might use colour coding to facilitate children's capacity to visualise; that teachers use the process for maths, art work and as a pre-writing activity.

In the *Teaching for Effective Learning* workshops, the examples which Atkin used related mainly to spelling. She took participants through six steps in learning to spell a word, claiming that

the critical mental process for spelling is the ability to form a strong and accurate visual image of the word. Good spellers often rely on motor memory to sense whether a word is correctly spelled and they certainly rely on their auditory processes to attack words that are new to them. However, they would not be good spellers if they did not first and foremost use strong visual processing of information. I am not arguing that visualisation should be used as the only strategy for spelling—rather that it is essential (*Inservice course notes*, 1992b).

Another form of visualisation which Atkin taught in the *Teaching for Effective Learning* workshops was what she described as "Mind Journeys", "Guided Visualisation" or "Guided Imagery". Mind journeys, according to Atkin (*Inservice course notes*, 1992), can be designed to

- encourage parallel development of visual images with language and vice versa
- to create a vicarious experience—especially effective at establishing personal relevance, arousing interest, encouraging empathy
- to engage any of the four main processing modes of the brain
- to enhance creativity
- harness inner thoughts, images, feelings as preparation for problem solving, writing
- influence behaviour and mood
- to get into the part for role plays (actually for role taking), acting, etc.

Atkin took participants through a guided visualisation and presented the range of situations in which the process could be used.

Seventeen teachers reported transferring to their own classroom practice the strategy of visualisation, six of which were reported in the questionnaire. Some teachers used it for spelling, maths, creative writing, art, and for goal setting. The following quotations indicate examples of the use of visualisation from a range of areas. The examples were taken from interview data.

The majority of teachers used visualisation for spelling:

[In spelling] I have been just getting people to look and cover and...see the word, and told them to be able to spell it backwards and forwards (PPIO 4, 1993).

...the spelling as well—I have used it a lot with teachers ... And many children need to be taught how to visualise ... if they are going through this process of “look”, “say”, “cover”, “write”, “check”; they don't know how to visualise it, and is a total waste of time. So you need to have all these activities in place in kindergarten/prep so they are actually...trained to be able to do [visualisation], to understand how they visualise as well because you can with the younger children. I did lots of it with my prep and some [grade] ones last year (PPIO 1, 1993).

I did a little bit of the visualisation for spelling at the beginning of this year with some Year 3 students that I had in another school, with mixed results but it was an interesting way we approached the process of spelling. With some they caught on to it really well, and they were able to use it. I think that was their style of learning, obviously (SLT 7, 1993).

We've done quite a bit of visualisation for spelling. And some teachers do visualisation every day now with their students (SLT 1, 1993).

I have got a boy in my class who has always had language difficulty in his spelling and writing. He does not like reading but he has been particularly creative and we have given him lots of opportunities in presenting his work not as written report. He can verbalise it if he wants to, he can put it to music and because of his confidence there it has also grown in the other skill areas. We have also used a lot of visualising with him for his spelling and that has improved remarkably... (SLT 9, 1993).

Students in one class suggested the process be extended to be used for maths as well, a fact commented on by some parents.

We did a lot of work with visual photographs...I was using that with spelling, and it was having tremendous success particularly with the really weak kids, and the kids came up one day...I still do old fashioned rote learning of tables, and they said, "Why can't we 'photograph' them", which I thought was wonderful, and parents had been in to say, "Look they have been taking pictures of things and learning their tables". But it works. That's something I hadn't thought of. It came from themselves, so I thought that was really good (PPIO 5, 1993).

A teacher/assistant principal went so far as to maintain that visualisation was 'the key to success in the world'.

Visualisation is the key to success in this world. I mean it's no big surprise. If you can become a visual or more visual person, you are almost guaranteed some form of success.

My daughter is a good example. P. P. at R. Primary uses a lot of visualisation and [my daughter] was...a lot like me in terms of her spelling, she couldn't spell to save herself and her spelling has gone ahead in leaps and bounds.

She is getting 18s and 19s out of 20 now and she is spelling at a level, her level, so she has developed quite well. But I know P.P. in that class does visualisation almost daily with the techniques—similar techniques—and it is paying off (SLT 1, 1993).

The visualisation process was found to be time-consuming though effective in one instance, because ultimately the children could visualise to the point of seeing the word backwards in their mind's eye (a 'true test' of visualisation, according to Atkin, 1992). This teacher reported its success as follows:

So we tried a couple of imagery and visualisations exercises and techniques, and a couple to do with our words—our spelling organisation. We tried getting the children to work in pairs, and one person in the pair took the other person through an imaging/visualisation process of their word of their spelling, and they had to paint it in their mind and the other person was talking them through it. And when they had painted it in their mind and they could see it there, then they wrote it. And we actually tried that for a couple

of weeks, but it took about half an hour for them to do their five words each, so we tried it for a while and then with the pressure of the day it didn't seem to continue, and I'm only in there two days a week, so on the other days I didn't know if it was happening or not. It lapsed over the last few weeks. But that seemed to be really effective...I was training them in groups and we were playing with different words in that way, and we were trying some of the techniques like reading the letters back to front rather spelling it out. I tried with the word like "dinosaur" which a couple of them knew, but most of them didn't. And we painted on our "wall" in luminous yellow paint. And we all sat there and I'm leading them all through it, and I'm getting them to really see the word and I said, "OK, so you spell it. But start from the last letter". And it just came. The children were just telling me from around the room what letters were next and we spelt dinosaur, and I thought I liked the sound of this! So yes we tried it but we haven't got it into an organisation yet we'll go on easily. But it doesn't seem to easily last on the days when I'm not there (PPIO 4, 1993).

During observation visits to this teacher no visualisation activity was taking place, though on the occasion of the above interview, the classroom was full of material relating to prehistoric animals. It is reasonable to believe that 'dinosaur' was on a spelling list and used for the visualisation activity.

The use of colour was found to be effective in two cases of children with spelling and learning difficulties. In the first example the teacher added 'chunking' in colour for further benefit and was observed using the process. The two teachers described their success with colour as follows:

For the children who were having difficulty [we did] lots of visual imagery and work like that, and getting them to build the picture in their mind, and carry it and retain that and see the video through in their own little way, lots of imagery and different things there for children who are having trouble with things. Everyday I still date the board 'cause there are children in my class who...are still having difficulty with their spelling and clusters...Julia [Atkin] was saying for them to chunk it—do each colour. Just simple little things like that, well I do that daily now. And if there is something like a difficult word I would write it in their "look", "say", "cover", "write", "check" book in the chunks in the different colours. And it just...works. It really does. It's such a basic simple little thing. Someone came in one day, and said, "You're just making your board look pretty". I said, "No, there is a reason why I am doing it". Such little things, but it makes a difference...So if you had "Tuesday" you have 'Tues' and 'day' in the two separate colours so that they could see the patterns like they see the day...I didn't force it on those who are already

good spellers because if it's working well for them maybe it's fine but then, on the other hand it could also be another way to enhance what they are already doing (PPIO 2, 1993).

We are working with a grade 2 child who is having learning difficulties. The teacher said to me, "He can't read, he is hopeless", and I talked to him and asked him about his bedroom and he could tell me about home and I said, "Oh, can you spell?" and he said, "Oh I can spell anything". And I put a word..."successful" on the board and he looked at it and we did it in different colours and he wrote it and he retained it. And the teacher was quite stunned. It was the relationship to colour and the way it was written and he worked from there too (SLT 9, 1993).

A grade 1 teacher claimed to have used visualisation strategies for spelling prior to attendance at the Atkin workshops, but learned further refinements and, post-workshop, used the strategy more deliberately.

I did things like that before, but not as purposefully—not across the broader fields of learning. It was more just instinctive—to get [the children] to pay attention, to be active learners rather than this is a way to develop thinking.

I'm much more deliberate. I build in a few more things like, "What colour can you see? What shapes can you see? Draw the shapes with your hand as you are looking at them. Do it backwards", instead of just saying, "See in your mind". [I'm] trying to help people see it in their mind, and I think that's what I got out of the workshop—that these things are worth going into in more depth. It's like looking into one of those computer patterns, when the more you go into them, the more the same repeats, and to me that's what I got out of the workshop—that you can really go into learning—that you don't have to by-pass just the surface (PPIO 1, 1993).

However, she found that not all children in the class could visualise, so she provided extra tuition.

Now in a big group situation like that I know that there are children who aren't doing it or who aren't doing it very well...I draw those people out later into a smaller group and we really go into it...these are the students that are not yet good sounders, spellers, writers (PPIO 1, 1993).

Calculating numbers in students' heads was an application of visualisation used by one grade 1 teacher.

In mathematics a really interesting area I found is when I ask them to see in their minds, for example their thinking about “six”. “See something about six in your mind”. We’ve done a lot of work on it. “Now tell a friend” and then, “Who would like to share with the whole group?” I found that really interesting—with early multiplication and addition and subtraction. So it just adds another dimension to the whole thing instead of just doing it with counters...There’s another little factor built in so you just increase their understanding of what it all is, and their memory (PPIO 1, 1993).

Using visualisation strategies to assist children with their drawing was commonly reported. For example,

I have been using it a lot with my grade 2 this year and as motivation for art work. One afternoon I just had to go and take a class and thought, “What will I do?” and I thought, “I’ll do [visualisation]”. And [I] got some beautiful art work out of them (SLT 9, 1993).

“Before” and “after” visualisation strategy for sketching was used by a grade 1 teacher, which she claimed, showed a ‘remarkable difference’ in the drawings of some children. Examples of “before” and “after” sketches of “Me playing my favourite sport” and “A portrait of myself”, done by children in this class can be seen in Appendix 8. The researcher was present for this activity and observed the whole process. This teacher described another incident of using visualisation as follows:

Now when children have sketched something like cats [they] tended to be the symbol of the cat. Then we’ve gone through a little visualisation exercise ... picturing your favourite cat, and how does it feel; what colour is it; watch the cat move and go up and touch it and tell your friend and listen to your friend and then we sketched. [There was] a remarkable difference with [subsequent] sketches (PPIO 5, 1993).

A secondary science teacher used guided imagery to teach the concept of blood flow through the body.

In science, its easy because you pretend you’re a red blood cell and you’re going through the body. You’re in this small intestine, you go up into the capillary...They [the students] have to track it (SLT 6, 1993).

Using guided imagery prior to creative writing was claimed by some teachers to be effective. Five teachers made the following comments about their perceptions of its success.

I've found that [visualisation] was really good when we began imaginative writing—once-upon-a-time writing. It seemed to make their thoughts ... their imaginations flow which can be difficult. Sometimes children of this age just do the "I did...", "I went ..." for a long time before stepping into fantasy, and [visualising] gets them started (PPIO 5, 1993).

For writing I used it with a prep/1. I've used it with older classes as well and found that it has been terrific...Their writing is much better...It was well worth it...Some of their creative writing from their guided visualisations...was absolutely fantastic...We also did a couple of the mind journeys. Mind you they were very brief, very short ones and some children did some really interesting writing from that and we've got some really good discussions from that (SLT 9, 1993).

One class in particular was a [grade] 4/5, and it was like drawing blood out of a stone [so] I did some guided visualisation. Now that teacher has...continued doing that. [The children's] creative writing has developed wonderfully and they are now able to orally express themselves (SLT 7, 1993).

As a result of teaching other staff members guided visualisation, one teacher reported that a colleague used the process to prepare her students for a performance. The performance, she claimed, was a considerable success.

She took an assembly with her Grade 3 children and before they came and did the assembly, she sat down and she visualised the whole assembly with them—and the success—and that was one of the most wonderful assemblies we have had (SLT 3, 1993).

A special education teacher reported using visualisation with a child with a minimal attention span, and claimed to have had some success with developing the child's memory. She reported:

I use visualisation a lot. In fact I have got the Nancy Bell book and I have worked with three children, and particularly one child who has a concentration span of nothing, and I had a very interesting time working with him with visualisation, and [his concentration span] has been picking up a

little bit...[I use it for] instruction, for him, for memory, developing a memory. He cannot understand clearly what...information teachers are giving him. And through visualisation he is beginning to be able to hear some of the components of the conversation that's coming across. Before it was all jumbled...I found working with this boy extraordinary because he just could not make pictures (SLT 2, 1993).

Another grade 1 teacher used visualisation to overcome a similar problem to the one described above, and part of the six weeks of concentrated visualisation processes were observed by the researcher. 'Matthew', according to this teacher, 'had a real problem communicating, speaking or responding to instructions' and 'his therapist said he might be at risk in the classroom because of his auditory and kinaesthetic problems'. The process used was to have Matthew relax and close his eyes, and to 'make a story in his head' about some activity the teacher wanted him to do, such as collect a pencil and paper from a tray on the other side of the room. 'Matthew' was then required to 'tell the story' to the teacher, before performing the task. On a subsequent visit, this teacher reported that with the help of 'Matthew's' mother, who used the same strategies at home, he had shown that 'he's really improving. He's reading quite well, his mathematical thinking is quite good and he's beginning to write and spell, whereas before he'd just sit. Now I have to tell him to stop shouting, whereas before he wouldn't speak or communicate.' 'Matthew', according to this teacher, became proud of the 'pictures in his head'.

Encouraging children to 'picture in their own minds' when reading books, would help them to make meaning from the texts, according to a teacher/librarian. She reported that the children were uncomfortable with the process, but she expressed a wish to persevere:

In today's lesson I wanted them to picture in their own minds, because they actually don't like doing that. They get really disruptive, agitated by not watching the pictures as I read the story.

I had short picture stories to get them through to begin with, now I've started off with a lot more text and I don't show them the first couple of pages. Instead I ask them questions to begin with so they get the idea, and then I show them the picture and go through the story now. Next week when I do it, it'll be three or four pages that I keep from them before I show [the pictures],

and then I'll go back and say, "This is how this illustrator saw it. Is it different from your picture?" That sort of thing—to try and build [their pictures] up and carry that over...If you only give kids picture stories then they are going to always rely on the picture cues to get the meaning from (PPIO 3, 1993).

Mind mapping: Atkin uses the term 'mind mapping' to incorporate two processes: *association* maps and *concept* maps. Her rationale for teaching the processes in her workshops is as follows:

The power of mind mapping techniques lies in their integration of right and left brain processing. They have the potential to aid:

- creativity
- understanding
- communication
- grasping the 'big picture'
- seeing connections, relationships
- clarifying ideas
- showing relationships of 'trees' to the 'forest'
- bringing order to brainstorm
- identification of what's known and what's not known

(*Inservice course notes*, 1992b).

The process which Atkin refers to as association mapping is also commonly known as 'mind mapping' (Buzan, 1974; Margulies, 1992).

Fifteen teachers from all groups claimed to have used mind mapping. None were observed, though examples of children's mind maps were provided from two classrooms and can be seen in Appendix 8.

In one grade 3/4 classroom a large mind map was created by the children on the classroom wall, depicting aspects of Tasmania, the state in which they lived. This was on display at the time of a post workshop observation. This teacher claimed, in an interview, that she had heard of mind maps prior to attendance at the Atkin workshops, but had not used it before as a teaching strategy. She described this as follows:

We did some mind mapping on the last theme we did. We put "Tasmania: What do you know about it?" in the middle, and they branched out with those

sorts of things they knew. We've done lots of work like that. It's probably a thing that wasn't new to me, but wasn't in my current repertoire of what I was doing. I suppose it just heightened my awareness to things I had seen or had been using before, or picked up from a one-day seminar without the background of why to do it. Maybe I had seen it, but not in context...didn't know why I did it. I know it's working. We did concept mapping with "dragons" too...and they really enjoyed it. We did it at the beginning and we did that at the end again...it was an evaluation—monitoring—to see what they had gotten out of the whole unit. It went really well...it was a really good way to see how much they understood (PPIO 2, 1993).

Another teacher, who used mind mapping, maintained that she had heard of the process before, but had not used it in the classroom:

I really liked the idea. I've tried a couple of them with children and I like the way they work with them too. I've come across them before—they were more in line with the gifted and talented programme, but I'd never seen them in action. I thought they were really good and wanted to try them (SLT 4, 1993).

A grade 2 teacher described how quickly students adapted to the process of mind mapping and how some of them applied it to other learning situations:

We brainstormed, either as a whole class or then perhaps as an individual, like when we started this latest theme with healthy food...and even before I put anything up on the wall or did any preamble at all, they did it, and they are really in the habit now of drawing their main idea, putting the main word in the center and then just taking the arms off. A few now will do all the time. The weaker kids just find eight to ten words, but it gives them a start, and some of them use [mind mapping] for story writing (PPIO 5, 1993).

A grade 1 teacher, prior to Atkin's workshop, considered that children as young as this would not be able to do mind mapping. She tried this in her class and found that they could do it, describing the outcome as follows:

I've used mind maps and concept maps when we're talking about things and clarifying brainstorming. I thought they wouldn't be able to concentrate and interpret but I've found they can. For example we're discussing snails this morning in our brainstorming. I construct them as the children talk...The children have also started their simplified very personalised little mind maps...and I find the way they talk about it...explain to other people is really

interesting. So it's not just what they put on paper, it's what they can describe to the group...It seems to make the learning more meaningful [because]...I think it does help them to make connections and see a broader picture than having a wash of words. I am surprised at how they take meaning from diagrams whereas I hadn't thought it applicable for very young children (PPIO 1, 1993).

Mind mapping was found to be useful by a special education teacher, but she thought it would not work for all the children with whom she came in contact.

I have done mind mapping, not a lot but, yes with one or two people it has been a great asset. But really I am working right down bottom of the scale. And they are really [problems]—even mind mapping is hard for them. So yes I think that I would use that with certain children but I don't come into the contact with the children who would use that (SLT 2, 1993).

Mind mapping was widely used in one school in which the principal provided considerable support for the implementation of Atkin's Framework for Effective Teaching. The grade 6 teacher, who had attended the workshops, assisted other teachers to use mind mapping. This teacher reported that older children retained the ability to mind map and transferred the skill to high school the following year. She reported:

All the teachers mind map right down to kindergarten. In the kindergarten and the preps we have taken them through mind mapping using symbols rather than words...I have done a lot of modelling throughout the school in classes. Particularly in the grades 1 and 2, they did not believe that it could be done, the children did not have the skills and I went up and we brainstormed and we classified and they're using lots of colour too for the visual learners.

In fact the children that I taught last year have gone to high school and I have had phone calls from the teachers saying 'what's this mind mapping?'. They have noticed the children, before they write, are actually getting in and doing a mind map of what they are doing. So that is really exciting. We use the mind maps, too, and I have got examples, I think. For before we go into a topic we ask the children what they know, and they mind map it, and then [do it again] as an evaluation at the end as well. And that is recorded. Many classes use that (SLT 3, 1993).

A secondary science teacher said that she was still using concept maps a year after attendance at the Atkin workshop, and that they were a useful organising process for her students. She claimed that the students liked doing them. For example,

Concept maps where that's sort of your interpretations put into a flow chart...use that. And it works [for students]. I honestly use that. That's one thing I took from there...They read, they talk, they make up, they link. And that's what I really believe in. That was good. I really that was good...I find that they like the maps, the concept maps because it is not lengthy, wordy, ... it's concise but it puts it all together so they're quite keen. So I still try [them] (SLT 6, 1993).

The use of concept maps was not as widely reported but in one case an assistant principal indicated that she used concept maps in professional development situations with the whole staff and with an individual teacher.

So we investigated [classroom relationships] via a concept map ... It was fairly crude because the purpose was about getting what we knew down about relationships and for the purposes of facilitating changes in [the teacher]. But I know that within me the concept map was a structure that I had then been able to draw on that I mightn't have done before [the workshops] (PPIO 3, 1993).

This teacher was observed on two occasions drawing concept maps to clarify her own ideas, and claimed that, for her, this was one of the most useful outcomes of the *Teaching for Effective Learning* workshops.

Vertical transfer

Vertical transfer, according to Joyce & Showers (1983:5)

refers to conditions in which the new skill cannot be used to solve problems unless it is adapted to fit the conditions of the workplace—that is, an extension of learning is required before problems can be solved effectively. Vertical transfer is more likely when: the context of training and the conditions of the workplace are different; a given skill is different from one's existing repertoire and does not fit easily into it; or additional understanding is needed to achieve executive control over the skill...Executive control consists of understanding the purpose and rationale of the skill and knowing how to adapt it to students, apply it to subject matter, modify or create instructional materials attendant to its use, organise students to use it, and

blend it with other instructional approaches to develop a smooth and powerful whole.

It was assumed that evidence of vertical transfer would make reference to reported or observed behaviour on the part of a teacher which indicated that: (a) some aspect of the workshop required additional learning before a skill could be implemented in a classroom, because a strategy did not easily fit with a teacher's repertoire, or that (b) additional understanding was required for the teacher to achieve "executive control" over the strategy. Executive control, in the sense that Joyce & Showers (1983) intended, would be indicated through an expressed conceptual understanding of the Atkin's Framework for Effective Teaching, and how it might benefit student learning.

From data collected for this study, over a three year period, it appears that the overwhelming majority of teachers transferred, in Joyce & Showers' terms, at a *horizontal* level.

Minimal evidence of vertical transfer emerged, with only two teachers from the **pre- and post-interview and observation group** reporting the process by which they conceptualised and reflected on Atkin's work as they attempted implementation. It is interesting to note their reported discomfort associated with new learning and their attempts to grasp a conceptual understanding of Atkin's Framework for Effective Teaching. This conceptual understanding, they reported, was absent until the three workshops were completed, after which they claimed to have achieved to a clearer understanding. The descriptions of these two teachers' efforts to comprehend beyond just the use of strategies, are described in detail to show that the sense of discomfort and, in one case, loss of confidence while learning a new skill.

The first teacher described, in her journal (see Sample 1: Appendix 6), her loss of confidence as she attempted to implement ideas from the Atkin workshop:

I'm still not really happy or am confident that it is going OK. I read once about the Implementation Dip that occurs when some change is being trialed

and implemented and that teachers' performance actually drops off before you can see the benefits of the change. I hope this is happening to me (PPIO 3, 1993).

In an interview, this teacher talked of her frustration with lack of the 'big picture'. While she said she was willing to employ strategies, she needed an understanding of where the use of strategies fitted with the concept of Atkin's Framework. She reported:

I'll continue to do that—to incorporate strategies from the model in everything I try and do, even if it's in the spelling groups that I have. I'll look at getting kids to look at different ways of trying to remember the word, whether it be through pictures of the word, or through walking out the word—trying to get it into their muscle memory. I continually address the strategies and try and incorporate those, but my frustration is: Am I doing that OK? Is this where it's supposed to be? When will I know I've got it right? Will I know I've got it right?, or am I on this never-ending cycle of trial and error, trial and error? I'm really uncertain about the effectiveness of what I'm actually doing.

I have to have a look at the picture. I understand where it's going. I understand that she is incorporating a whole lot of different strategies, not so much strategies...a whole lot of different concepts, and aspects about the way in which people learn, in order to facilitate and enhance learning. I generally understand that in a conceptual sort of way. And then I understand what she's doing with regard to visualisation. I understand the bits, but I haven't made the connection between the bits and what I see as the concept of where I am going to. I haven't made that link. I've got all the bits on this side, and I've got the big picture on this side, (*gesturing*) but they don't link together yet.

I'm missing a bit of theory that I think is going to give me the link. I'm missing a bit of the theory that I need to finish something off. I've got a hole somewhere and it's like having a key and unlocking the door. You've got to know when you've got it, but I don't know what it is that I'm actually searching for (PPIO 3, 1993).

On completion of the final workshop this teacher described how the 'garden' metaphor Atkin had used to synthesise and integrate aspects of her Framework, had created the 'big picture' she had been seeking. The metaphor involved viewing the teacher as 'gardener'; viewing the 'garden' as the structure created by a teacher when designing learning experiences for children; the 'plants' as students, and

'garden tools' as teaching strategies. Discussion relating to this metaphor had occupied a session in the final workshop. This teacher described how the metaphor clarified her ideas, as follows:

When she actually gave us the visual—the image she gave us about the garden, that's when it clicked...It's in my head, that's the integration...I have got, literally a picture or an image about what it is, and so what I am doing now is more purposeful because it's part of the garden...

I bought [*sic*] in some strategies that I had from before, because it fits into the whole notion of what I want my garden to be like. It's just that once I clicked with the garden imagery, and really what the garden looked like as it related to people, I felt it had all come together. Julia's model fits into it. I suppose what I struggled with for a long time, was trying to make Julia's model discrete. Julia has got a model, but it wasn't discrete from other things that I knew, but I was trying to make it discrete.

No one gave me the garden, though I am not sure that, had someone given me the idea or the notion about blueprints and gardens, tools and strategies, whether or not it necessarily means that Julia's stands alone and right apart from any other model...I think it is the image and the way she was able to build up the image that was the most powerful learning, in that it allowed me then to bring in other learnings, apart from the concepts, the strategies and the techniques and her model about integration, allowed me to bring in others. If you take hers as being the crux of a whole lot of other theories about learning and teaching, then you can make connections in a sort of a web about how they all join together (PPIO 3, 1993).

This teacher described how her own integration and clarification of Atkin's ideas led to a sense of confidence which, she claimed, had a positive effect on the students. One aspect which she said she had been working on was increasing her range of questions to incorporate four ways of thinking, a concept taught by Atkin in the workshops.

I just felt as if it had come together and it was interesting feeling wise. I felt really sort of sad and disappointed that it wasn't going to keep going on.

It made things a lot clearer for me and being fairly close to this last two days I felt things tied together like it drew together for me.

I got really warm feelings [when I got back to school], and it has been easier for some reason ever since...I don't know if I have changed anything, in fact I

can't think that I actually have, except that things seemed to be working better for me. I don't know whether or not I am not trying as hard as I was before, perhaps that was why I was sort of stumbling through things. I was trying to make it harder than what it was. I suspect that is what it might have been. Or whether or not something did click and I am much more aware about trying to use a range of questions and getting kids to sort of think more laterally about the way they process and do things.

Like yesterday when I was in a class for the afternoon, as you know, putting the model together, it really came together for me. That was the thing that I really struggled with over the last few months, but I felt great yesterday. It was the same sort of feeling that all of a sudden I had been able to actually transpose it all into a grade 1 class, which up until now I hadn't felt that I had done very successfully...I am kicking more into the language of remembering the sorts of questions that perhaps trip me around the four quadrants a bit more (PPIO 3, 1993).

The second teacher who could be said to have transferred skill and knowledge vertically from the Atkin workshop to the classroom, describes her early inability, in Joyce & Showers' (1983) terms, to gain executive control of Atkin's constructs, for lack of information. She also indicated a sense of excitement with content received in the early workshops and the promise this held for her understanding.

I probably haven't got enough [about the Atkin model of *Integral Learning*] to satisfy myself. I think I've got starting information, but because I don't feel I've put it all together for myself, I wouldn't be comfortable saying I had an academic knowledge of it yet...I probably could [explain it] with Julia's notes. I could do it on a more academic level, but I don't feel comfortable that I've experienced it enough myself to take it on and say yes, I understand it fully. Part of the explaining would help you do that I'm sure. That's part of the learning process anyway. But I wouldn't like to launch into that yet. I'd like to know more about it first...The excitement of finding out new things that sounded as if they might be really interesting and really vital and things I wanted to know more about. So you're almost on a cliff, and over the cliff there's this Utopia...of information, and you're going to find it out and it's going to be really meaningful and vital, and change the way you see things...And you're there, and you get glimpses of it through the clouds, but you can't see it all yet. And every time you get a glimpse of something you go 'oh yes, yes, yes, this is going to be great.' And so I need to find my way down the cliff on to the land (PPIO 4, 1993).

This teacher explained why she needed all the information Atkin was imparting:

I have got to find the full impact of it...I am not satisfied just taking the little bits. I want to know that I have got everything in place. (PPIO 4, 1993).

The final workshop provided her with what she said she had been missing earlier, though she expresses a need to pursue the ideas gained in the workshop through further study in order to further her understanding. According to this teacher:

I felt really good [after the last two days]...At the beginning of the days...when we all got there, I wondered where we were going to head, I didn't know what we were actually going to have finished up with, by the end of the time. It was the sense of expectation, but not really being sure what was going to happen. Something was just around the corner that was going to be very meaningful and I had to just make my way around that. And then on Friday when she started going back over everything again, and drawing all the threads back together it all made a lot more sense. And I suppose I felt as if I was this far away from capturing something that was going to be IT for me; it was going to put it all together. It was almost like the bulb, the light bulb was just about to come on and illuminate everything and I was just a tiny weeny bit away from putting it together which was why I wanted to continue with the work 'cause I felt...this is the ideal thing to continue working with. And I knew that if I didn't do something more...I might lose that and not be able to capture it again, so that was why I thought if I could do something through the masters course...[Julia's] offered me a completely different perspective and far more information than I had before on learning and teaching and it's just there and I want to just explore it a bit more and go for it.

- I have got to do a lot more of writing about it, and a lot more talking about it before I am really comfortable with how I think [the Atkin Framework for Effective Teaching] works. Because every time I sit and look and the stuff I get a new glimpse of it again, I get something else from it and think, "Yes, oh I hadn't put that part of the puzzle together yet, that fits there, that's really good, that's something else". So if I can do something with the Master's course on it what it will give me the luxury of is the time and the right almost to give the time to work on it (PPIO 4, 1993).

As with the previous teacher, this teacher talked of the need to practice the skill of questioning to engage children in four ways of thinking, before it became part of her repertoire. In Joyce & Showers' (1983) terms this stated need to rehearse appears to be an indication of *vertical* transfer. She describes her rehearsing of questioning as follows:

I think to become part of your natural repertoire you are going to have to rehearse [questioning] more carefully so I need again to write out some questions, to write out the sorts of language that you need to use to make sure you're accessing each quadrant. So that's not something I don't think you can go in and just do and think, "Oh I am going to start question today" because by the time you compose your question and you have got it clear...what how you need to say...so it's going to have to be more of a rehearse thing, and actually writing them word for word, and begin to use it self-consciously before it becomes a natural thing (PPIO 4, 1993).

It is interesting to note that the two teachers who had transferred vertically also talked at length, in interviews, about the extent to which they reflected on their practices. The first claimed to do a lot of 'soul searching' in her job:

I constantly reflect on what I do, day after day after day...which makes for some (fairly) soul searching times. If you have a bad day...if things don't go the way that you wanted them to go, I constantly search out the reasons why...to try and avoid that from happening again. I've done a lot of work over the years...professional development work...to try and maximise my own understanding and teaching and learning strategy...right from being at SR [school]. And then starting further study last year, it's all been in an effort to maximise what I do as a result of the reflections that I force myself to take part in...It never stops. There's never a point when I think I've got it covered, I'm OK. I don't have to worry about anything (PPIO 4, 1993).

The second not only reflected on her own teaching but used reflective group work with her staff. She reported:

Generally I have a bit of a framework in my mind about looking for the things that have gone well, and perhaps alluding to the underlying reasons for why sessions or aspects of their program have gone particularly well. I always start with positives, then I ask them to reflect on something they would have liked to improve on, or something that they think they could have done better, or would need more information about in order to develop further (PPIO 3, 1993).

It appears from the preceding data that while the majority of participants appreciated the workshop, only two of the interviewed teachers were willing to attempt, in Joyce & Showers (1983) terms, to gain 'executive control' of the conceptual structure of Atkin's Framework. Data obtained from the questionnaire

did not indicate any *vertical* transfer of skills and knowledge from the workshops to classrooms

Factors which helped or hindered implementation

Research Question 3 asked:

Which factors help or hinder the transfer of skills and knowledge learned in the inservice program?

The preceding data indicates that there was a considerably higher number of horizontally transferred strategies than attempts at using ideas and strategies which may require new learning and subsequent loss of competence or confidence (that is, *vertical* transfer). One possible reason for the results could have been a lack of support for teachers in implementing aspects of Atkin's Framework for Effective Teaching, yet support for those making changes is considered a key feature in successful implementation (Fullan, 1991). In this study, interview, questionnaire and journal data showed that only one of the thirty one teachers clearly indicated that there was administrative support for her implementation of aspects of Atkin's Framework for Effective Teaching.

Through her principal's professional and financial support, this teacher was able to work with the whole staff in professional development sessions. She described the support as follows:

And of course we have got lots of support from D. M., the principal. He is right behind it too. So if you've got that, and that interest, it really is important (SLT 3, 1993).

The whole staff and we have continued in that vein. The teachers have all had 6-8 weeks evening sessions working with me both last year and this year on planning. We have released teachers—new teachers to the school. [The] music teacher and the kinder teacher have been released for a day to work with me and we have come up with plans even with the kindergarten of whole brain lessons, and in music on the whole brain in the quadrants (SLT 3, 1993).

And in fact it is one of the priorities and a lot of money, professional development money has gone into it and it's still a priority in the school next year (SLT 3, 1993).

Next year, which is really exciting in the school, the two rooms as you come into the school are going to be two grade 5/6s, and I will be on one. Another teacher who is extremely interested and will work with Julia next year is on the other. She is going to the course. We are going to have that as a "whole brain" unit, so that is really exciting, and we are going to develop it together (SLT 3, 1993).

Despite the support within her own school, this teacher also expressed an interest in meeting the workshop participants again for further input, because 'I think you need to sort of feed off each other and get that enthusiasm back' (SLT 3, 1993).

Other teachers expressed their desire to talk to others in order to clarify ideas and get help with implementation. A teacher wrote in her journal:

I feel really isolated in trying to change this aspect of my practice. I keep asking for ideas and feedback (asking specific questions about some of the ideas and how others are implementing the change). I don't feel like I'm getting anywhere. I can't decide if it's what I'm planning and teaching that is the problem or whether it's because of the unfamiliar age-group (PPIO 3, 1993).

The need to talk to others, was, for the same teacher, a necessary factor in the transfer of new skills and knowledge. This need, or what she thought of as her learning style, was a source of frustration for her. In an interview she described that feeling:

My frustration might just be that I don't learn very well on my own. I like to talk about it with other people and despite the fact that I've got J. and D. here...and coupled with the time factor and probably our different approach to the way we like to learn things anyway, has impeded that natural... "What are you doing here?" and, "How does it fit with that?" and initiating that sort of discussion. So the frustration might be my way of learning more so than anything else. But I'm really frustrated. I need to regroup and get back with people and talk about some of the things that they're doing so that I can re-see the vision (PPIO 3, 1993).

Communicating with others to clarify and revisit their ideas, or where they may take new learnings, was process three teachers expressed a need for. They indicated their needs as follows:

Yes. Talking to others...Time to get back together to sit down to talk about it and reflect on what we've done as a group, and what other people have been doing...'cause that just prompts you—your memory—and where you can go from here (SLT 10, 1993).

The bouncing off each other's ideas; it...just refocusses everyone into where they are, what they are doing and how is it for them, and for the children and that's probably what it has done for me (PPIO 2, 1993).

I was explaining the process that I am going to go through with Julia's work with the people tomorrow, and again...it was fresh right there again. As soon as I started thinking about her work and re-reading some of the stuff, it came straight back so it's not lost for good. It's just buried a little bit under mountains of other things. And when I have got the time to sit back and take it up again it will be there again (PPIO 4, 1993).

Administrative support came from schools and principals when they provided funds for the teachers to attend Atkin's workshops. However the expectations on teachers thereafter varied from school to school. Some teachers were required to report to their school staff on the content and processes of the Atkin *Teaching for Effective Learning* workshops. One, who had clearly stated that she had not implemented any aspect of Atkin's ideas, for lack of time, or a clear picture of how she could implement them with prep children, was required to present an overview of her workshop learnings to parents and teachers. In preparing for that presentation, she claimed to come to an understanding of Atkin's *Integral Learning* model, indicating that

Since I had to sit down and really prepare myself for that meeting a couple of weeks ago, the model is very clear in my head now, and I'm thinking of it far more than I was before, when I'm working in the classroom situation...That absolutely brought it all together for me. I had to sit down and read through the folder, and [not only] had to read it, I had to try and apply it, and really relate it to the classroom. So I had to transfer what I understood from the folder into what happens here or what I believe happens in primary [school]...I'm pleased that I had to do that because I'd still be sitting there thinking I must read through that folder, and I must get some of the reference

books that are recommended and read them. But having to stand up and tell someone else about it...(PPIO 6, 1993).

This teacher noted that she had come to realise that she had been 'doing it all along'. Observation notes and evidence from her diary (see Sample 2: Appendix 6) showed that she was mistaken, and in fact, she was not 'doing it'. She had clearly misunderstood the concept of *Integral Learning*. To her, catering for four ways of 'knowing', translated as different subjects which catered for different thinking styles. Atkin's intention was that meaningful learning of a concept involved an integration of experience, reflection, rules and principles and actions.

Two teachers from one school claimed to take the initiative in requesting that they be allowed to talk to the staff and described how they 'were quite fired up':

I actually presented a workshop to the staff...We were quite fired up and keen. And we taught [Atkin's] learning theory, some strategies...They were very interested and they came up and spoke to us about it...So that was really good...We initiated it because we thought...if this money is being spent on us there needs to be some justification...we went there and we enjoyed it. We said...all the staff need to know, need to be involved. K took them through an activity of visualisation...I gave them a concept to do Science. Yeah it was good...It was really well received (SLT 6, 1993).

A pair of teachers from another school said that they had assumed that they would present their workshop learnings to their staff, but the school had other priorities, so nothing eventuated. One expressed the opinion that a presentation would have 'firmed up our thoughts':

Well as it turned out we haven't had to fulfil any expectations because the school's been so overloaded that they haven't asked anything of us at all yet, so there hasn't been anything that happens from that point of view (PPIO 4, 1993).

If we'd had that expectation placed on us we probably would have by now...firmed up our thoughts anyway. But when we got back we were so fired up, we went in and said, "This is great what do you want us to do? When is the time available?" And there wasn't any. And it's gone on in that way, and there is no time available. They've spent all this money on us with no option for feedback yet, so as the time goes by you get more nervous

about...presenting something, because you've gone so long yourself without sitting down and you need to do a fair bit of...immediately writing something (PPIO 2, 1993).

No demands to disseminate their learnings were made on three teachers from one school, because, as one commented: 'it wasn't part of the school priorities' (SLT 5, 1993). Two of these teachers did a two hour presentation to the staff 'just to fill them in with what we did over the six days' (SLT 8, 1993). They also talked together about Atkin's *Integral Learning* model, their use of it, and the lack of staff involvement. One said: 'D and I talked a bit because we had an approach in common. We could approach it conceptually' (PPIO 3, 1993). She did not talk to the third member of her staff because 'she just did lots strategically, but ... didn't talk to anyone' (PPIO 3, 1993). She further claimed that the arrival of a new assistant principal, with a very different agenda for the school, led to a general lack of interest in pursuing the Atkin ideas.

Nine of the fifteen questionnaire respondents expressed a need for some form of support. One summed up the feelings of many teachers in this study: 'It would have been helpful to have understanding from senior staff, or at least someone who could visit to encourage me. Being innovative in education is a lonely and stressful position'.

Lack of support for their attempts at change was not the only reason teachers gave for not implementing aspects of Atkin's Framework. Most prominent of the reasons given were pressures of other school commitments, and time to review the material. 'Frustration' was a word used by seven of the interviewed teachers, in relation to these problems, which was summed up by one teacher, who said that 'I'm really interested and excited by [Atkin's *Integral Learning* model] but the frustration of real life again is continuing, and it annoys me that its got to be like that' (PPIO 2, 1993). There was a strong sense from the interviewed teachers that more time was needed to revisit the material learned in the workshops, and that unless time was available for reflection and talking to others, little would be implemented.

Summary

Having examined the relationship between the theoretical framework of Atkin's *Teaching for Effective Learning* inservice workshops, the workshop activities and the methods of presentation (Research Question 1, Chapter 5), it was possible to determine not only the level of implementation (Research Questions 2 and 3), but the possible reasons for high levels of *horizontal* transfer and low levels of *vertical* transfer.

The workshops clearly focussed on the third dimension of Atkin's Framework for Effective Teaching, that is, *appropriate mental processes*. While there was a brief reference to *relationships*, and one session on *psychological conditions* for effective learning, there was no evidence from any of the teachers that these concepts translated into changed classroom practice. While aspects of *relationships* and *psychological conditions* were seen in all observed classrooms, it could not be assumed that this was a result of the workshops, because teacher behaviour in these areas did not change from the beginning to the end of the year. After the three workshops were completed, only one teacher related her interest in the significance of *relationships* to Atkin's workshops, but talked of it as a reinforcement rather than something learned from Atkin.

The analysis of the 1992 *Teaching for Effective Learning* workshops indicated that the workshop contained many factors which could well be emulated in other professional development situations, and interview data showed that the majority of teachers highly valued the workshops. One aspect that they claimed to value was learning about Herrmann's Whole Brain Model (1989), and in particular having their own Brain Dominance Index completed. In fact twenty nine of the thirty one participants mentioned it in interviews and in the questionnaire. Other aspects of significance for the participants were the relaxed, non-threatening environment, and the practical nature of the workshops which provided strategies to use in their classrooms. However, the enthusiasm with which participants described the workshops, did not translate into the level of implementation which could be reasonably expected.

Observation and interview data concerning implementation were categorised according to Joyce & Showers' (1983) *horizontal* and *vertical* transfer. Results indicated that the overwhelming method of transfer was *horizontal*, that is, teachers took from the workshops those strategies which could be easily implemented in the classroom, without disruption to ongoing teaching practice. Strategies most commonly transferred were visualisation, guided imagery, and mind mapping. Teachers reported using these strategies in their classrooms and perceived them as valuable for children. Three teachers were observed using visualisation for spelling, maths, and for instructions taking. Another teacher produced children's drawings as examples of her use of visualisation.

As previously stated, the idea most commonly mentioned in interviews was that of Herrmann's Whole Brain Model (1989). With twenty nine of the thirty one teachers referring to it as a valuable tool for understanding themselves, their students and their colleagues. There was no observed or reported evidence of how this 'valuable tool' translated into practice. This is a clear example of the gap between espoused and actual practice (Argyris & Schön, 1974).

Evidence of *vertical* transfer, that is, teachers conceptualising the activities into their teaching professional knowledge and practice, was described by two teachers only.

In relation to Herrmann's Model (1989), teachers used the rhetoric of engaging all ways of thinking, but most of them only implemented those strategies related to Herrmann's model in an ad hoc fashion, based more on what they perceived as helping students to learn, rather than on theoretical understanding of the principles of Herrmann's Whole Brain Model.

Teachers may have had an understanding of a key feature of Atkin's Framework for Effective Teaching, and her *Integral Learning* model, but interview data indicated that, with one exception, they could not articulate that understanding. Only one of the thirty one teachers was observed employing the principle of Atkin's *Integral Learning* model in her deliberate planning for integrated learning.

Two teachers, regarded by their peers as high-quality teachers, were found to be practising the principles of the Framework, in that they were deliberately engaging their students in a range of ways of thinking, with no reported discomfort or disruption to their normal practice. In this sense, these teachers could be deemed to have transferred vertically. It should be noted that both teachers claimed to have taught this way, intuitively, prior to Atkin's workshops, but were now more deliberate in their practice having, as they maintained, a theory for their practice.

A possible explanation for the lack of discomfort with which some teachers enacted the ideas from the workshops was that many of them claimed that Atkin was only telling them what they already knew 'good' teaching was about. So in this sense, the understanding was not new, the workshops simply made explicit what they knew intuitively. In other words, Atkin was tapping into their existing craft knowledge. 'Good' teachers may not need to struggle with Atkin's Framework to have conceptual understanding. It may be that for the 'good' teachers, the gap between their existing practice and Atkin's espoused theory and practice, or their *zone of proximal development* (Vygotsky, 1978), could be easily closed. Atkin was providing teachers with something that anchored into teachers' craft knowledge and developed it to a much higher level. This in turn seemed to give them more confidence and more professional empowerment.

While only six of the thirty one teachers were observed, evidence from that data reflected the self report interview and questionnaire data, that is, that little transfer occurred beyond the horizontal, and that only three strategies, visualisation, guided imagery and mind mapping were used to any extent. The rhetoric about understanding differences in learners was not shown to have changed teacher behaviour, though it is acknowledged that it could have occurred in the classrooms not observed. This study did not explore teachers' attitudes towards students. The only evidence of awareness of different learning needs was seen in the observed classrooms where children were grouped according to ability for maths and literacy. There was no evidence that these groupings were based on different learning styles.

If an inservice program which is held in such regard by participants fails to deliver more than *horizontal* transfer, there are serious questions to be posed for both the designers of inservice programs and for those responsible for ensuring on-going support for the implementation of new ideas.

Low levels of *vertical* transfer could have been as a result of the flaws in the conceptual structure of the Framework, identified in Chapter 5, that is, that confusion of language and diagrams could have mitigated against teachers developing a comprehensive conceptual understanding. While teachers showed enthusiasm and agreed with all information given to them, the structure did not provide a means whereby the Framework could easily be enacted in practice. And while Atkin made it clear that she did not want participants to simply copy her model, it was presented as a means of improving the learning of students, therefore, it could be expected that teachers would try to emulate it. Any pool of teachers would range in ability from good to less competent, and it would be expected that good teachers would take implementation further. Results showed that only two described, and none were observed, going beyond simple *horizontal* transfer.

The timing of the workshops, that is, three two-days, spread over a school year avoided the 'one-shot' inservice workshop, which Fullan (1991) claims are 'widespread but are ineffective' (p. 316). This timing could have supported the *horizontal* transfer which occurred, because it allowed ample time for implementation and feedback. Blame for low levels of *vertical* transfer could not only be directed at the inservice workshop itself. Clear evidence of lack of support for teachers returning to their classrooms reinforced Fullan's (1991, 1993) assertion that collegial and administrative support is essential for those undergoing change, so it is not surprising that transfer was overwhelmingly at a *horizontal* level.

This chapter provides a brief overview of the study, its methodology, aims and outcomes. It discusses the results and draws conclusions about the investigation into a commercially presented inservice program and its impact in terms of the transfer of skills and knowledge acquired by teachers in that program. The chapter also points to further research which could be undertaken as a result of findings from this study.

Discussion

Since the quality of teachers determines the quality of the school system (Coulter & Ingvarson, 1985), it is imperative that high calibre inservice programs are provided for teachers to assist them in maintaining their professional competence. Professional development for teachers, which appropriates a large slice of educational funding in Australia, needs to be cost effective. For inservice to be cost effective, the transfer of skills and knowledge acquired in inservice programs therefore must occur.

This study aimed to critically examine a commercial inservice program *Teaching for Effective Learning* (Atkin), its impact on teacher behaviour in classrooms and factors which influenced the transfer of skills and knowledge learned in the workshops. Prior to this study a survey of the literature available on ERIC and AUSTROM data bases demonstrated that there was no critical analysis of commercially provided inservice programs, their presenters and their outcomes, had been undertaken in Australia.

A detailed examination of the characteristics of any inservice program, the content and mode of its delivery, and of the transfer of skills and knowledge to classrooms, provides valuable information which can inform policy makers, principals, inservice providers and teachers. That information is about both the attributes of successful inservice programs and their providers and, of significance for educators, the factors which lead to positive outcomes in terms of implementation. This study has highlighted the multiple factors involved in success or failure of the implementation of skills and knowledge learned in workshops. It shows how those influential factors relate to the inservice program itself; to teachers' willingness to change their behaviour, and to action, or lack of action, taken by principals or other staff in supporting those teachers facing change in their classrooms.

It should be noted that this study was focused on a workshop which was highly regarded by teachers throughout Australia, which was school or teacher selected rather than system selected, and for which teachers volunteered to participate. The popularity of this particular inservice program and its 'teacher-judged' effectiveness, would therefore seem to be ground for successful implementation.

Three research questions guided the study: Each will be discussed in turn.

Research Question 1:

- What is the relationship between the conceptual structure of the *Teaching for Effective Learning* inservice program, the research literature on teaching and learning, workshop content and the methods of presentation?

This broad question was concerned with all aspects of the *Teaching for Effective Learning* workshops and sought to provide an indepth understanding of its conceptual structure; how that structure related to the existing literature on teaching and learning; the content of the workshops and the way they were presented, and Atkin's role in the popularity of her workshops.

In addressing Research Question 1, the study revealed: (a) the nature of the conceptual structure of the *Teaching for Effective Learning* workshops and problems with its documentation; its wide ranging theoretical underpinnings, and levels of both congruence and incongruence between its theory and practice; (b) a detailed account of all that was taught in the workshops, thus providing a comprehensive record of all that could be implemented; (c) factors which both affirmed the literature on successful inservice programs and presenters, and which were deemed successful by participants in this study, and (d) aspects within the workshops which could have contributed towards low levels of implementation of skills and knowledge in classrooms.

The conceptual structure of the *Teaching for Effective Learning* workshops, that is, Atkin's Framework for Effective Teaching, was ascertained through a document analysis of Atkin's publications (1984, 1990, 1992a, 1993, 1994); Atkin's unpublished PhD thesis (1977), the *Inservice course notes* (1992b), and through the video-taping of a series of *Teaching for Effective Learning* (1992) workshops.

A comparison between Atkin's theory and practice revealed high levels of congruence between Atkin's teaching style and the three dimensions of her Framework. In other words Atkin developed good *relationships* with participants, ensured that the *psychological conditions*, which she deemed important, were in place and she engaged the *appropriate mental processes* of participants in her presentation. The literature on adult learning (e.g., Knowles, 1990) indicates that adults learn best in a supportive environment, and Atkin's enacting of the first two of her dimensions (*relationships* and *psychological conditions*), shown through observation and interview data, could be deemed to have created a supportive environment. This level of congruence, therefore, could have been partially responsible for the very high regard which participants had for Atkin and the workshops.

A measure of incongruence, however, was revealed between Atkin's Framework for Effective Teaching and the content of the *Teaching for Effective Learning*

workshops, in that emphasis was placed on engaging *appropriate mental processes*, with minimal time being devoted to *relationships* and *psychological conditions*. Atkin's explanation for this anomaly was that the concept of *appropriate mental processes* was least understood by teachers (Transcript of video-tape of workshop, March, 1992). However only one teacher from the pre- and post-interview and observation group referred to *relationships* after attending the first workshop, though the majority had mentioned its significance prior to attendance. Therefore it could be argued that an imbalance in content could have lead to a perception that one dimension of the Framework was more important than the others.

As noted in Chapter 5, a review of the literature relevant to the three dimensions of Atkin's Framework for Effective Teaching revealed a wide range of teaching and learning theories which underpinned the Framework, namely, humanistic psychology (e.g., Rogers, 1983) and cognitive psychology (e.g., Ausubel, Novak & Hanesian, 1978), together with constructivist theory, Kolb's Experiential Learning (1984) and theories of brain function (e.g., Herrmann, 1989). Documentation of these theories reflected the imbalance found in the workshop presentation and, along with confusing diagrams, made the summary of Atkin's Framework for Effective Teaching the most problematic aspect of the entire study. There was a lack of clarity within the material, as well as a lack of congruence between diagrammatic models which describe aspects of her Framework. If an understanding of Atkin's Framework was problematic for a researcher, with ample time and access to documents which teachers are unlikely to read, then it could be argued that teachers, with less motivation and time, may have difficulty in developing a conceptual understanding of Atkin's Framework, and/or a cogent set of workshop related behaviours.

The way in which Atkin documented her Framework, and the range of ideas presented in the workshops, may have lead to the confusion that teachers displayed during interviews, particularly when asked to articulate their understanding of Atkin's *Integral Learning* model (1992), one of the key

components of the workshop. Lack of clarity in documentation seemed to mitigate against the extension of participants' thinking and practice and was compounded by a lack of significant attention to demonstration, practice feedback and classroom monitoring (Joyce & Showers, 1980). This could explain the limited incidences, found in this study, of *vertical* transfer of skills and knowledge from the workshops to the classroom.

There is a compelling reason why documentation, particularly the Inservice course notes, needs to be clear and unambiguous. On returning to classrooms from attending inservice programs, teachers face the routine of day-to-day teaching and administration, with all their attendant pressures. It is highly unlikely that everything taught in workshops will be remembered, or reinforced through instant implementation. An aide-mémoire, in the form of comprehensive notes, first, allows teachers to revisit and reflect on material learned and second, could provide significant support material for those attempting transfer of skills and knowledge learned in an inservice program. Documentation needs to be an accurate representation of theories of teaching and learning, presented in a 'user-friendly' way and should encapsulate a range of issues without overwhelming the reader. Most importantly, that documentation must contain valid and reliable information. Atkin's *Inservice course notes* (1992b), for example, contained accurate and clear notes and diagrams relating to cognitive theories of long-term memory, referenced to Baddeley (1983). Also clearly presented and constantly reinforced in the workshops, was material relating to theories of brain function, in particular Herrmann's Whole Brain Model (1989). However, there is contrary information (Le Bon, Smith, Tenney, & Thompson, 1994) which indicates that application of theories of brain function may not contribute any positive outcome in terms of student learning.

An element of the *Teaching for Effective Learning* workshops which could have contributed to its high levels of acceptance by teachers, was the nature of its content. It should be recalled from Chapter 3 that the content of inservice workshops which appeal to teachers are those which are practical (Sharan &

Hertz-Lazarowitz, 1982); are easily adapted to classroom use (Conners, 1991), and are seen by teachers as a means of improving the learning of their students (Smylie, 1986). Sharan & Hertz-Lazarowitz's (1982) study showed that practical activities of this nature were important to teachers, if the activities helped them to cope with the main focus of their working lives, that is, the teaching of children. In the *Teaching for Effective Learning* workshops activities were designed for immediate use in the classroom, and Atkin devoted nearly half of the six days to demonstration and rehearsal of strategies, examples of which were concept mapping, visualisation and mind mapping. Many of the strategies presented, such as concept mapping, are to be found in the literature of cognitive psychology (for example, Novak, 1984) and were not new to teachers, but were given new significance through their association with Herrmann's Whole Brain Model (1989). The strategies of visualisation and mind mapping fit Conners' (1991) assertion that teachers want curriculum content and methodology that can be readily adapted to their classrooms. In terms of practical difference in the classroom, implementation of these strategies would mean fairly minor changes to routine teaching. The nature of the activities such as visualisation and mind mapping are of a kind that can be incorporated into traditional approaches to teaching, therefore do not require extra effort on the part of the user. The same strategies affirmed Smylie's (1986) notion that, not only did teachers want strategies of practical value, but they wanted skills and knowledge which would improve the learning of their students. Teachers in this study consistently reported that learning was improved as a result of using visualisation strategies. The strong component of practical strategies in the *Teaching for Effective Learning* workshops could have been one reason for the workshops being held in high regard by teachers, and supports current research into factors affecting the impact of inservice courses for teachers (for example, Conners, 1991).

Data relating to Research Question 1 revealed Atkin's methods of presentation, and those aspects which the literature indicates underpin successful presentation and those aspects which mitigate against effective implementation. A review of

the literature in Chapter 3 identified the following principles which appear to underpin successful presentations of inservice programs:

1. Appropriate approaches to professional development, particularly a 'growth' approach (Eraut, 1987).
2. Attention paid to principles of adult learning (Wood & Thompson, 1980; Moore, 1988; Knowles, 1990; Conners, 1991).
3. Content which teachers can readily adapt to classroom use (Smylie, 1988, Conners, 1991; Churchill, Williamson & Grady, 1995).
4. Content which teachers deem will improve the learning of their students (Conners, 1991).
5. Issues of change and implementation being addressed as part of the content and process of the workshops (Fullan, 1991).

Results of the study indicated that the first four of these principles were attended to in good measure, while the last was addressed minimally. The way in which Research Question 1 illuminated these five principles are discussed below.

A developer or presenter's approach to inservice programs may have a bearing on teachers' acceptance or otherwise of the program. While acknowledging that 'knowledge and skill development' is the most commonly employed method of presentation for inservice programs, Fullan & Hargreaves (1992), argued that it tends to be a 'top-down', 'expert' method which could lead to resistance to change on the part of teachers. Lieberman (1995) pointed out that inservice programs designed to deliver information in this manner is the traditional mode of delivery and should be changed. A more appropriate approach, she claimed, is based on the recognition that teachers' learning needs are similar to student learning needs—that is, professional development should provide learning situations which involve active experience in problem solving, and lead to teachers being able to articulate their learning. An analysis of the *Teaching for Effective Learning* workshops revealed that Atkin used, in part, a 'knowledge and skill development' method of delivery, but combined it with a 'growth' approach (Eraut, 1987), that is, one which could also be described as experiential, in the

sense of Kolb's (1984) Experiential Learning Model. The latter approach is a process recommended for the teaching of adult learners, since it 'maximizes the transfer of learning from training setting to application on the job' (Wood & Thompson, 1980:376).

Participant observation by the researcher, evidence from the video-tapes, and subsequent interviews indicated that teachers enjoyed and highly valued Atkin's teaching style and she appeared consciously or unconsciously to pay attention to principles of adult learning (Moore, 1988; Knowles, 1990; Conners, 1991). In doing so she acknowledged teachers' prior experiences and, in fact, built on these experiences; she made clear the 'what', 'how' and 'why' of the content of the workshops; based all learning in the context of the workplace, and provided a climate of trust and respect between facilitator and participants and between participants, in a secure environment. Moreover, Atkin clearly motivated the teachers through her enthusiasm for, and commitment to their profession. In this sense, findings of this study support the literature on adult learning and effective workshop facilitators. However the theory of adult learning, while pointing the way to successful inservice programs, in terms of motivating participants, does not address the issue of how that effectiveness can translate into implementation.

As previously stated, Atkin grounded her program in the prior knowledge of teachers. In fact, she made it clear in both her publications and the workshops, that her theory was largely based on her own experiences of working with teachers (Atkin, 1993). The teachers could, in a vicarious way, claim ownership of the content of the workshops because it was emphasised by Atkin that their colleagues in other states of Australia, had, over the years helped Atkin build her understanding of effective teaching. While teachers appeared to value having their own experiences taken into consideration, this may not, in itself, move a participant beyond their existing skills and knowledge. Having their prior knowledge accepted and valued would lay the foundation for a high level of readiness for conceptual internalisation to occur.

Embedding the workshop content in the context of the workplace and teachers' prior knowledge may also have been the reason why one concept from Atkin's workshops, Herrmann's Whole Brain Model (1989), was readily referred to by teachers. It could be argued that the fact that teachers had their own Herrmann Brain Dominance Index (HBDI) completed as part of the workshop, played a role in developing that understanding. The HBDI of the teachers formed the basis of much of the content of the workshops and Atkin herself referred repeatedly to this model, while placing emphasis on the different learning styles of participants. The experiential approach used by Atkin in the *Teaching for Effective Learning* workshops, in this instance, could have explained why a majority of teachers claimed to understand, and value, the idea of different types of learners, as shown in Herrmann's Whole Brain Model (1989). However, while teachers reported during interviews, that they understood both the theory and the practical implications of Herrmann's Whole Brain Model in the classroom, only three teachers of thirty one in the study appeared to use the principle in practice with their students. This is even when the majority claimed to better understand their students and colleagues as a result of learning about Herrmann's model.

A further possible explanation for the apparent popularity of Herrmann's model was that it is inclusive of all types of learners. It is hardly surprising that teachers were attracted to a model which gave them an insight into the range of learners in their classrooms. The impact of the associations that teachers made between Herrmann's model and their own learning and that of their students, supports the literature which espouses the effectiveness of the experiential learning model for adult learning (Wood & Thompson, 1980), but does not show that experiential learning leads to implementation. Clearly there is a gap between assumptions which may have been made about the significance of experiential learning as a valuable learning process and what this study has shown, that is, that there is no necessary consequential follow-on because a learning process is useful and well accepted.

The preceding discussion indicated that Atkin provided content and employed methods which the literature shows to be good inservice practice. However, as previously stated, transfer to classrooms of skills and knowledge learned in the workshops was predominantly at a *horizontal* level. This, in part, could have been the result of Atkin's lack of attention to other issues which the literature (for example, Joyce & Showers, 1980, 1983; Fullan, 1991) deem necessary for successful implementation. Joyce & Showers (1980) claim that when mastery of a new approach is the desired outcome, then learning should involve theory, demonstration, practice, feedback and classroom application. While all four of these conditions were present, in part, in the 1992 *Teaching for Effective Learning* workshops, the focus of the workshops was on extending the teachers' knowledge of teaching and learning, but minimally on the process of implementation, and classroom practice was not closely supervised. Participants' apparent lack of understanding of Atkin's *Integral Learning* model (1992) demonstrates that the four points listed by Joyce & Showers (1980) were not sufficiently addressed.

Atkin's model was based, in part, on Herrmann's Whole Brain Model (1989), yet despite the fact that teachers remembered and frequently referred to Herrmann's model, interview data indicated that the *Integral Learning* model (1992) was not well understood. Video-tape data revealed that there was a consistency between the concepts espoused in Atkin's *Integral Learning* model and the teaching of it. While one pencil and paper activity (that is, the rewriting of a unit of work) was undertaken to demonstrate and practise the principle of the *Integral Learning* model, Atkin did not articulate the connection between her theory and the way in which she demonstrated it. Nor did she do so with all other strategies taught in the workshops and teachers apparently failed to make the connection between the theoretical framework which Atkin claimed she was working from. Atkin seemed to make the error of assuming that the modelling of her theory was sufficient. These findings indicate support for the idea that modelling is not adequate for transfer and, in particular, for Joyce & Showers' (1983) notion of

vertical transfer. So while modelling is deemed important, it is not sufficient to ensure understanding which, in turn, leads to *vertical* transfer.

It has been shown that lack of attention, in the workshops, to the change process, may have mitigated against high levels of implementation. A compounding factor which could have been responsible for the predominance of *horizontal* transfer, that is transfer of strategies which cause little disruption to routine teaching procedures, was the lack of clarity of some of Atkin's documentation. For *vertical* transfer to occur, Joyce & Showers (1983) claim that a conceptual understanding is required. If inservice course programs are to achieve more than *horizontal* levels of transfer, documentation of theoretical material presented to participants needs to be clear and congruent with workshop activities. It would seem important then, that designers of inservice programs need to ensure that documents which accompany workshops make clear the theoretical foundation on which those activities are based, that those activities reflect examples of that theoretical concept in practice, and that theoretical underpinnings are based on sound, well researched theories of teaching and learning.

Accurate identification of the transfer of skills and knowledge learned in the *Teaching for Effective Learning* workshops was one goal of the study. The analysis of the content of the workshops, through video-tape and observation, provided a detailed picture of all that had been presented in the Atkin's workshops.

Methodologically, this was a significant aspect of the study because it effectively tied together the workshop content and processes with implementation. As a data gathering approach it provided the total picture of Atkin's workshops and their impact. Observations, interviews, teacher journals and student work provided rich data for that total picture and though, as a methodology it was too time consuming to be easily replicated, it provided a thorough understanding of the skills and knowledge which had the potential to be transferred to classrooms and a means of tracking workshop material through to classrooms. For those interested in evaluating learning which takes place in a workshop, similar information gained from this study could be ascertained through less time

consuming and costly methods. Alternative approaches could involve teacher demonstrations of skills learned, or workshops conducted on a 'cascade' model in which one teacher, sent to an inservice program, disseminates knowledge gained in a systematic way to other staff members, to create a 'cascade' effect.

That issue of transfer or implementation was addressed through Research Questions 2 and 3.

Research Question 2:

What aspects of the *Teaching for Effective Learning* inservice program do teachers value and translate into classroom practice?

There is an assumption that teacher learning in inservice programs can lead to change in teacher behaviour. However, change is hard work; it involves risk (Galton & Williamson, 1992; Fullan, 1993); it can go hand-in-hand with conflict, particularly if change involves a tension between an innovation and the implicit theories which teachers have about teaching and which guide their practice (Brown & McIntyre, 1989). Change may be avoided by some but accepted by others, depending on their cognitive processing style (Joughin, 1992) or problematic for all because of demands placed on teachers by school systems (Logan, 1994). Problems with the implementation process may be exacerbated by lack of collegial and administrative support for those facing the personal issues of change (Fullan, 1991, 1993). (This last point is addressed through Research Question 3).

Data gathered through observation (video-tape) presented a comprehensive picture of all that was presented in the *Teaching for Effective Learning* workshops. Results showed that of approximately eighteen concepts and strategies taught, only two, visualisation and mind mapping, well-known cognitive strategies aimed at improving long-term memory, were consistently found to be in use in classrooms. Significantly, these strategies were transferred only at a *horizontal* level, that is they were transferred without disruption to teachers' existing

beliefs and practices. It would appear that the overwhelming majority of teachers in this study avoided risk-taking in transferring strategies, but 'bolted on' the strategies to existing practices instead. In the preceding discussion relating to Research Question 1, it was shown that an aspect of the workshops which was highly valued by teachers was the gaining of strategies which were deemed to be easily adapted to classroom use, to be of practical value and to improve student learning. The data therefore affirms the literature relating to teachers' preferences for inservice content and indicates that teachers prefer to transfer skills and knowledge to their classrooms at a *horizontal* level.

As previously shown, teachers also valued the focus on Herrmann's Whole Brain Model (1989), an idea presented to teachers which was congruent with their implicit knowledge about learners. This model is general and encompasses the wide range of learners which teachers would encounter in their classrooms. Atkin presented Herrmann's model as a valuable tool for understanding themselves, their students and colleagues. Interview data revealed that teachers constantly referred to it. It may have been remembered and valued because it gave teachers a way of understanding themselves and their own students and because it fits in with the notion of recognising participants' prior knowledge and a 'growth' approach to professional development. However, data showed that even though teachers said they remembered and valued it, there was minimal observed or reported evidence of how this 'valuable tool' translated into practice.

Closely allied to the valuing of Herrmann's Whole Brain Model (1989), was the teachers' frequent reference to having their implicit knowledge of teaching made explicit. A teacher's implicit theories about teaching, or their craft knowledge (Brown & McIntyre, 1989; Grimmett & MacKinnon, 1992; Batten, Marland & Khamis, 1993; Fenstermacher, 1994) was a theme which emerged from the data of this study. It appeared, from video-tape and interview data, that Atkin was, in large part, presenting what was already known to teachers; she articulated known 'good practice', thereby accessing the implicit knowledge that teachers had about teaching, and she gave teachers a language to describe their practice

(Williamson, 1991; Galton & Williamson, 1992). This may have been a motivating factor underlying the popularity of the workshops because it provided those who perceived that they were already 'doing it' with an explicit explanation for their implicit knowledge of good teaching practices. However it also gave the same language to those who were not 'doing it' so that they could use the rhetoric, even if they were not practising it. Because Atkin claimed to have based her Framework for Effective Teaching on sixteen years of experience of teaching and working with teachers as an education consultant and because of the breadth of the Framework, it is not surprising that she may have described, in general terms, teachers' craft knowledge. However, simply having their craft knowledge tapped, and being given a language to describe it, did not lead to significant change in teacher behaviour in this study. This finding confirms Ingvarson & MacKenzie's (1988) conclusions that popularity in itself did not necessarily guarantee ability or willingness to implement change.

Teachers valued having their craft knowledge articulated, particularly those who were already 'best practice' teachers. Interview data from four teachers indicated that they believed they were practising the principles of Atkin's Framework for Effective Teaching, and observation confirmed this. All claimed to be motivated by the model because their practices were affirmed and reinforced through gaining a language to describe it. A study by Guskey (1988), which focused on the implementation of instructional strategies for mastery learning, had similar findings. Guskey (1988) concluded that those with high levels of efficacy, who were proficient teachers and who enjoyed the work, were the most receptive to the innovation. This researcher maintained that strategies which lead to mastery learning were probably already being practiced by proficient teachers and therefore were more likely to be motivated. The research by Guskey might provide some insight into the case of four teachers in this study who were enacting aspects of Atkin's Framework for Effective Teaching without apparent difficulty, while claiming to have always taught that way from an intuitive understanding of their students.

However there is a point at which this study diverges from Guskey's and therefore necessitates some hesitation in taking his findings entirely. Guskey (1988) posited that when attendance at inservice programs is strictly voluntary participants are likely to have better results in terms of implementation than non-volunteers. This, he claims, is because teachers who volunteer for inservice may be the more motivated and committed. If Guskey is right with this assertion then high levels of implementation should have occurred as a result of the *Teaching for Effective Learning* workshops. Contrary to Guskey's assertion though, the evidence from this study was that being a motivated volunteer for inservice does not necessarily lead to successful implementation. The implication therefore is that other factors are involved.

The discussion so far has shown that attention to the change process in the workshops is important, but it is also reasonable to assume that the cognitive style of teachers who attend inservice programs will play some part in their ability and willingness to change (Joughin, 1992).

In any inservice program there will be a range of personalities, abilities, beliefs and attitudes, therefore attitudes will vary towards and inservice program, its processes and content and towards risk-taking in implementation. Participants in the *Teaching for Effective Learning* workshops were presented with material in a supportive environment. The literature on adult learning (e.g. Moore, 1988; Knowles, 1990) asserts that teachers are self-directed learners, who need to learn in such an environment. Joughin (1992) challenges these assumptions, claiming that the cognitive learning style of a teacher can dictate their capacity for self-direction and need for a supportive environment. Some teachers, Joughin (1992) argued, will have an analytic ability which will allow them to conceptualise the requirements of the learning task, and will have an awareness of their needs in working towards meeting goals of new learning, whereas others lack this ability and require structure and more assistance in the implementation process. Joughin's (1992) assertion could explain the differences in cognitive styles and

therefore attitudes, towards implementing skills and knowledge found among participants in this study.

Differences in reflective practices will also play a part in acceptance of non-acceptance of change (Schön, 1983). Two teachers in this study had shown reflective self-awareness in their interviews and journals, and had demonstrated when observed, a willingness to struggle with the concepts and skills while transferring *vertically*. This supports Schön's (1983) assertion that a reflective practitioner is more likely to accept loss of competence and confidence while learning new skills and knowledge.

As this study has shown, personality, attitude and ability are important, but are not in themselves the most influential factors in bringing about change. Willingness and ability to change must also be seen in the context in which teachers will make those changes; that is, the school. Here, more influential factors such as the administrative and collegial support which teachers receive may be the greater influence, for it can be assumed that, with appropriate support, most teachers whatever their cognitive style or ability, can be assisted to change. The various factors which were shown in this study to help and hinder the change process are discussed in relation to Research Question 3.

Research Question 3

Which factors help or hinder the transfer of skills and knowledge learned in the inservice program?

Change for the majority of teachers is a complex and risky process if that change involves disruption to existing practice and a subsequent change of beliefs. Collegial and administrative support for change (Fullan, 1991, 1993) will assist with practice which could lead to change in belief (Galton & Williamson, 1992). Huberman & Miles (1984) pointed out that innovations that involved change, 'lived or died by the amount and quality of assistance that their users received' (p. 273). In presenting her workshops, Atkin indicated an understanding of the

process of change through her affirming of the importance of forming networks within and between schools, while implementing skills and knowledge presented. However, of critical importance in this study, with one exception, no follow-up from this series of workshops was addressed by Atkin or any other agency.

Assistance for change may come from principals or senior staff, district personnel, parents or consultants (Fullan, 1991). However despite the extensive documentation on the need to support teachers, results in this study indicated that assistance for teachers was minimal. Only one of the thirty one teachers reported having encouragement from her principal to not only implement aspects in her own classroom, but to work with other staff to do likewise. Through the support of her principal, the teacher in question conducted at least six staff meetings and implemented, throughout the school, some strategies which she had learned in the *Teaching for Effective Learning* workshops. Logan (1994) pointed out that the personal demands placed on teachers are increasing, and there are fewer opportunities for teachers to share ideas. It is reasonable therefore, to assume that for an inservice program to be successful in terms of implementation, support from principals and colleagues must be a structured process to ensure that change occurs.

This lack of collegial and administrative support has serious implications for policy makers. As part of the devolution of management, schools are making decisions regarding the professional development of their own staff. Principals decide, along with senior staff, if an inservice program is to be school-based or whether teachers are sent off-site to externally managed programs; whether or not attendance at inservice workshops is on an ad hoc basis or if professional development is an integral part of the school's strategic plan. However, just because the power of decision-making resides in schools, improved quality of education may not be a fait accompli, as this study has shown.

The quality of teaching is the focus of this study because that is the theme of the inservice program under study. However it cannot be assumed that there is a one-to-one correspondence between attendance at quality workshops and quality of teaching. Making a decision about professional development programs and who should attend them, is not sufficient. This study has shown that, unless principals look more closely at tying professional development to their school priorities and ensuring follow-up procedures, little will change as a result of their teachers attending inservice programs.

Australian reviews and investigations into professional development highlighted the often weak connection between professional development programs, and school priorities. McCulla (1994) pointed out that these reports recommend a stronger link between professional development and school planning. Locating staff professional development in a school's strategic plan would take into account the context in which changes will be made as a result of skills and knowledge learned in any inservice programs. Further, McCulla (1994) indicated that the reviews and reports criticised the lack of 'forward planning' for professional development, and the 'withdrawal', or off-site approaches to professional development, rather than a developmental approach which takes into consideration the context in which the teachers work. It is interesting to note that the teacher participants in the workshops which were the focus this study, came to a central location from a number of schools; the teachers ranged in grade levels taught, from kindergarten to senior secondary level, and the workshop participants also included curriculum developers and educational consultants. The workshop therefore had no specific context in which to embed the concepts being taught.

The lack of connection between school strategic plans and professional development was highlighted in this study through the number of teachers who reported that they could not inform the rest of the staff about what they had experienced in the *Teaching for Effective Learning* workshops. Five teachers reported that their expectations of disseminating their ideas to the staff were not

fulfilled because, on returning to their schools, they found that other commitments had priorities. Four other teachers in the study reported having presented at staff meetings, but, with one exception, had done nothing beyond one or two staff meetings. Here again, principal support, or lack of it, is brought to the fore. Principal support has a considerable bearing on teacher attitudes towards their follow-up obligations. Teachers can return to their schools with an assumption that they report to the staff, possibly in a one-off staff meeting, and in doing so have fulfilled their obligations. On the other hand, as shown in one case in this study, a teacher will have the expectation that what she or he learned in an inservice program will be disseminated in a structured way so that all may benefit. There is a considerable difference in the two attitudes and reflects the attitudes of the principals towards ensuring cost effectiveness of inservice programs. Embedding inservice programs in school plans, narrowed to one or two issues a year would more likely to lead successful implementation.

In summary, data obtained from the three research questions has highlighted the multiple influences which are brought to bear on the change process in schools, and the complexity of changing teacher practice. They have shown what makes a successful inservice program, but supports the literature in showing that an inservice program alone, however successful, will not bring about change on its own. Success was shown to relate to practical and adaptable content which teachers deemed appropriate and which they could transfer to their classrooms without disruption to ongoing practices; it related to the sense of comfort teachers had with each other and with Atkin, and being provided with a language to describe their practices. Lack of clarity in documentation and lack of attention to the change process within the workshops may have worked against implementation. Data obtained from Research Questions 2 and 3 illuminated what was probably a more significant reason for lack of *vertical* transfer, that is, a lack of clear articulation of support from senior staff in schools, and minimal commitment on the part of principals to monitor the outcomes of their teachers attending the workshops.

The three research questions of this study enabled the researcher to investigate an inservice program and trace it through to implementation and its impact in the classroom. Through the use of a multi-method and multi-site approach the study provided extensive data and an accurate picture of events both in the workshops and in the schools. The data is applicable to all levels of education—at system, school and individual teacher level. The data can inform policy makers, principals, senior staff or anyone involved in decision-making about what makes successful inservice programs. In the new economic climate in which decision making is devolved to schools, the study provides useful information about factors which can lead to cost effectiveness of inservice programs and to ways of ensuring that implementation occurs. If the ultimate goal of inservice programs is improved student learning, then effective outcomes from successful inservice must be achieved.

In addition to informing policy makers regarding successful inservice and implementation, this study adds to the literature on teacher craft knowledge through highlighting the means by which Atkin brought teachers' implicit knowledge of learners to an explicit understanding. Previous studies of teacher craft knowledge (for example, Brown & McIntyre, 1989; Batten, Marland & Khamis, 1993) documented craft knowledge as it related, in Atkin's terms, to *relationships*, and *psychological conditions* of learning. Atkin's inservice program highlighted teacher knowledge of learners and *appropriate mental processes* of learning. There is an active and growing body of knowledge on craft knowledge in Australia which follows, in some cases, from the United Kingdom. Since these studies have tended to focus on what Atkin refers to as *relationships*, and *psychological conditions* of learning, there may have been an assumption, from the literature, that these are the only factors in teacher craft knowledge. The data in this study may extend that understanding to knowledge of learners.

Recommendations for further research

This study was an extensive examination of an inservice program and its implementation. It provided valuable information for future evaluations of the suitability of professional development programs, their facilitators and factors which influence implementation. Its multi-method, multi-site approach provided rich data, but it is unlikely that the complexity of the study would easily be emulated without extensive funds being made available.

Recommendation 1

The study gives rise to a number of other research projects which could flow from this research into Atkin's or other well-regarded commercial inservice program. It is important that this occurs since Atkin is still, in 1996, in considerable demand throughout Australia. A more controlled, experimental study of the outcomes of Atkin's workshops, using the data from Research Question 1 as a basis for further study of its implementation is recommended. This could examine outcomes in schools where attendance at these off-site workshops are linked to school strategic plans. In undertaking a study of this kind, the researcher should utilise a more quantitative, empirical study which would close the research loop of what Rosenshine & Furst (1973) referred to as descriptive-correlational-experimental studies.

Recommendation 2

One of the significant aspects of this study was linking the content and processes of an off-site workshop with outcomes in term of implementation. This study showed that minimal transfer of skills and knowledge occurred from the *Teaching for Effective Learning* off-site workshops, though the participants were all volunteers and therefore more likely to be committed to change. Atkin also undertakes long-term inservice programs which are school-based and linked to school strategic plans, but would therefore involve some staff who may be less committed than others. A comparative study of outcomes from Atkin's school-based inservice programs could indicate whether the popularity of her program

under these conditions would lead to more effective implementation and therefore increased cost-effectiveness.

Recommendation 3

Further research is recommended into the personal phenomena of change, extending the current study and Joughin's (1992), which shows different approaches to change by teachers. Much of the literature assumes that all teachers need an encouraging environment and support structures. At least two of the observed teachers in this study indicated that they could face change without the support that others clearly required. It would be useful to further study teachers such as these to ascertain the personal characteristics involved, and whether such characteristics can be learned by others, given appropriate support in the learning process. Joughin (1992) showed, using Witkin's (1977) concept of field dependent/independence, that cognitive style was an important consideration in ability to change. An empirical study which tests cognitive style prior to attendance at inservice programs and which provides interventions appropriate to the needs of individuals, could produce valuable data about the personal requirements of change, particularly about those who traditionally have difficulty in facing change.

Recommendation 4

The research literature on teacher craft knowledge indicates that the methodology used is predominantly interviews and observations. It would appear, from the studies by Brown & McIntyre (1989) and Batten, Marland & Khamis (1993) in particular, that teachers, when interviewed, tend to report largely on teacher-student relationships and management issues. However, in this study it was shown that when Atkin presented teachers with an understanding of differences in learning styles, they reported having that intuitive understanding of learners. It is therefore recommended future researchers look at different methodologies to extend the work of Brown & McIntyre (1989) and Batten, Marland & Khamis (1993) to ascertain teachers'

knowledge of learners and work with teachers, as Shulman (1987) suggests, to codify that knowledge.

Recommendation 5

This study revealed that the considerable amount of time and resources which went into sending teachers to Atkin's off-site workshops did not bring the return in terms of changed teacher behaviour which could be expected. On that basis it could be said that the workshops were not cost effective. Traditionally, resources and funding have been directed towards the cost of inservice programs and providers. This study would suggest that resources and funding for professional development needs to be directed, as much towards the implementation process as to the inservice programs themselves. Further research could link the transfer of skills and knowledge learned in a particular inservice program to different approaches of schools to the follow-up process. A comparison between schools which link inservice programs to their strategic plans and which ensure follow-up support, and schools which send teachers to inservice programs with no follow-up could provide explicit data to support this study and the literature on school effectiveness (e.g. Fullan, 1991).

Conclusion

There are increasing societal expectations that teachers will perform at a high level of competence while adopting such things as new curricula, new technology or new strategies for enhancing the thinking of their students. For teachers to fulfil these expectations, many will be required to change their routine teaching behaviour, to acquire new skills and knowledge. However many experienced teachers have acquired their existing skills and knowledge through years of dealing with the day-to-day contingencies of the classroom, and for most, this means having achieved a 'level of comfort' in their teaching behaviour. Change could necessitate moving from this degree of comfort to new levels of competence. The work of Vygotsky in some way mirrors the theories of Joyce & Showers (1983) about the issues of moving from levels of comfort to new levels of

competence. The gap between teachers' existing knowledge and practices and their potential level of development could be likened to Vygotsky's (1978) notion of a *Zone of Proximal Development*.

If there is an expectation that teachers must change from a sense of comfort, while implementing new skills and knowledge, it seems imperative that high quality inservice programs and their facilitators are used, and that equally high quality support is provided to alleviate the potential problems of dealing with the unfamiliar. These two crucial elements of educational change form a major part of the *scaffolded instruction* which Vygotsky (1978) maintains must be placed within the *Zone of Proximal Development*, in order to assist a learner to reach their potential level of performance. In Joyce & Showers' (1983) terms this may be a coaching model. To simply demand that teachers adopt new practices can be self defeating, for in essence, it is negating any hard won level of comfort and competence. With current levels of stress in many of our schools, such approaches to teacher improvement have the potential to set up a resistance to change (Churchill, Williamson & Grady, 1995). If teachers have a reluctance to adopt new practices, they can avoid them by shutting the classroom door and quietly ignoring increasing demands for innovation. It seems imperative therefore that an articulated plan for inservice programs is built into a school's strategic plans, and contains structures which assist the change process over the long term, while taking account of, and building on, existing competent teacher practices. An inservice program designed to be embedded in teacher craft knowledge affirms existing skills and knowledge; it can give a sense of ownership of the content for participants; it can move teachers from implicit to explicit understanding, and is useful in raising the level of teachers' awareness of new practices and readiness to learn.

However, there is a danger that if teacher craft knowledge is the sole content of the program, the concepts are already known, and there are no challenges to existing practices, then no change will occur. In Vygotsky's terms, the inservice programs is operated at the level of known competence. Participants need to be

moved, with *scaffolded instruction*, or Joyce & Showers' (1983) coaching model, towards their teaching potential, through a process which combines the inservice content, with features of the change process itself. A workshop without any risk or challenge and a static method of delivery ceases to be of value in terms of implementation, nor does it meet the goals of professional development. The data from this study shows that unless there is some risk or challenge, unless there is some demonstration and feedback, there will little chance of *vertical* transfer. It is a misuse of resources to simply refresh teachers in courses which are embedded in what they already know.

In presenting inservice programs, facilitators need to present material which is just beyond existing experiences of all teachers. For 'best practice' or 'lead' teachers, this may simply mean affirming their practices and providing a language to describe those practices. It is a self-evident goal that the aim of an inservice program is to move the less experienced, less competent, or 'lag' teachers, closer towards the 'lead' teachers, but for some the gap may be too great. Therefore 'lag' teachers will obtain the language to describe best practice, but may not match the rhetoric with practice.

The above point makes it obvious that teacher educators or those professional development facilitators need to work with teachers to enable them to conceptualise and internalise material learned in inservice programs. Anecdotal evidence indicates that there is a lot of criticism of teachers from academics for their inability to conceptualise and internalise complex theoretical issues of teaching and learning. It may be equally true that academics need to learn ways of presenting those complex issues in a language more closely allied to the world of teachers. The finding that teachers felt empowered by having a language to describe teaching practice as a result of attending Atkin's workshops, was an important outcome of this study. However any language which teachers adopt to describe their pedagogy needs to be based on sound theoretical knowledge of teaching and learning. When teachers can articulate their pedagogy, they are more able to counteract critics who believe that anyone who likes children can

teach just as competently. Additionally, a clear, unambiguous conceptual structure to the inservice program, also based on valid knowledge, would seem a vital element of inservice programs. Just as important are notes which can support the inservice content, allow reflection on workshop activities, enhance what was learned and provide further reading for those who would like to extend beyond existing ideas and practices.

This study has produced confirmatory evidence about effective inservice programs and implementation. However of equal importance to the research literature is that until this study was undertaken, an exhaustive search of ERIC and AUSTROM showed that there were no prior investigations of inservice teacher education programs presented by private providers, with a follow-up study of its implementation. In using a multi-method, multi-site approach to the critical examination of one such inservice program, information was gained which could better inform policy makers in control of professional development funds, school principals and their senior staff, or teachers wishing to have their skills and knowledge updated. Information gained from this study points to the qualities which make a successful inservice program, but more importantly, to those factors which will lead to successful implementation. The study points out that, despite devolution of management to schools from central authorities, little has changed in terms of responsibility for ensuring that implementation occurs. In the present situation it can be seen that the resources and funding tends to be allocated towards inservice programs rather than towards implementation. This study would indicate that we need to redress the balance and allocate more funds to the process of implementation in order that workshops can be deemed to be more cost effective.

This study has supported the literature in a number of ways, while breaking new ground in others. It reflects previous research into the nature of successful inservice programs and presenters, particularly research which indicated that empathic, motivating facilitators, using an experiential approach, will help prepare the ground for change to be enacted. It also affirms research which

shows the type of outcome teachers want from inservice programs, and extends that understanding to show that not only do teachers want practical, easily adapted strategies which assist with student learning, but specifically want strategies to improve student memory, a key factor in learning. Finally, this study confirmed that popular workshops, however well presented, do not necessarily lead to substantial change.

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Part 1: Conceptual structure of the *Teaching for Effective Learning* workshops—Atkin’s Framework for Effective Teaching—A document analysis

Development of Atkin’s Framework for Effective Teaching

Atkin reported that an early ‘teaching’ experience sowed the seeds of interest in the successful practices of effective teachers and learners. On completion of a Masters degree in organic chemistry, Atkin was invited to run chemistry laboratories at the University of Sydney. In this teaching role she noticed a pattern emerging in her relationships with students.

I found that in the labs when students wanted to understand something they tended to come to me to ask for an explanation. If they wanted to know what to do they would go to anyone, but if they wanted to understand they gravitated to me. I started asking: What am I doing when I explain to them? I must be doing something different. If I can uncover what I am doing then maybe I can help others to do it (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

Atkin (1992b) maintains that her Framework for Effective Teaching evolved from several sources including her PhD study, experience of working with students lacking in motivation, and a desire to improve the quality of learning in schools and to help teachers achieve this. Much of her work since that time has been devoted to making explicit the practices of effective teachers and learners

(Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

In her PhD research at Cornell University Atkin focussed on describing cognitive processes using Ausubel's (1968) theory of meaningful verbal learning.

A key element of Ausubel's theory is the distinction he draws between *rote* and *meaningful* learning. Ausubel defines rote learning as the retention of information without extracting the meaning of the information. Ausubel defines meaningful learning, on the other hand, as occurring when new information is linked with existing knowledge of the learner; the meaning of the information to be learned is understood in terms of the learner's existing knowledge (Atkin, 1977:1-2).

In her study Atkin (1977) acknowledged the significance of prior knowledge, but indicated concern for differences in the way individuals organised cognitive structures. She asked

... how and why does knowledge become more appropriately organised in the structures of some individuals and not of others given the same instruction? Given all the variance in cognitive structure due to experiential backgrounds at some point one must face the issue of a capacity to integrate new information with existing knowledge in memory (p162).

For Atkin, Ausubel's theories were insufficient in that she was concerned to find out how the process of integrating knowledge occurred in learners.

Understanding the process of learning, she believed, may help to explain why some people learn more effectively than others.

A significant argument in her thesis seemed to be based on the premise that 'for any theory of human learning to be adequate, it will have to have as its basis a good working model of human memory' (Atkin, 1977:9). As a starting point in the development of her own framework Atkin (1977) used a model of human memory (Lindsay & Norman, 1972) which described the control processes (i.e. the monitor, the interpreter and the manipulative rules) which 'determine how

information is transferred among the various forms of memory, and ... determine the operations that will be performed by the memory system' (p.11).

Atkin (1977) argued that the capacity to integrate new information with prior knowledge is determined by the efficiency with which the control processes function. She claimed that:

[i]f the control processes of memory do not activate and search the appropriate area (malfunctioning of the monitor/interpreter system) meaningful learning cannot occur, and even if the appropriate area of information is activated and searched meaningful learning will not occur if the appropriate manipulative rules are not used or the appropriate rules are not executed without error. Moreover lack of motivation, accidental factors such as headaches, willingness to tolerate "cognitive clutter" and reward for rote learning may also interfere with meaningful learning (p.39). (Emphasis in original)

In her research study (1977), Atkin aimed to build a model 'that (1) describes how knowledge is represented in cognitive structure, and (2) which can explicitly describe the processes by which new information is stored and retrieved for use in new learning and problem solving' (p.7).

Atkin (1977:57) examined models by West & Fensham (1976) and Klausmeier (1974) which were in the Ausubelian framework, but maintained that she found little to change her view that 'theories of learning that are not based on a theory or model of memory ... cannot speak precisely about the events of learning'. Studies of problem solving by Newell & Simon (1971, 1972) helped Atkin clarify the functioning of the control processes of memory and she claimed that these studies convinced her that 'there is a good deal of correspondence between the control processes involved in problem solving and the control processes required for meaningful learning' (p.68).

Drawing on the ideas of a model of memory (Lindsay & Norman, 1972; 1977) and a model of problem solving (Newell & Simon, 1971; 1972), Atkin claimed that she developed an information processing model of learning and problem

solving. She showed, through her studies with students of organic chemistry, that strategies which guide the control processes of learning and enhance problem solving and meaningful learning, can be developed from her model of effective teaching.

Atkin's (1977) doctoral study focussed on cognitive aspect of learning. Since that time she has developed a detailed and comprehensive model of teaching which is presented in her inservice program, the *Teaching for Effective Learning* workshops. Atkin reports (1994) that this model has been shaped and refined from teaching experiences since 1977, in high schools, and from her work as an educational consultant.

A particular teaching situation with students uninterested in science influenced Atkin's thinking that learning involved more than just cognitive processes. This teaching situation involved secondary students in a science class at a high school in Harden, N.S.W. Her perceived problems with the lack of motivation of the students led to an action research project, which involved a radical review of her methods of teaching science to those students. Subsequently, the entire school curriculum and teaching methodology was reviewed (Atkin, 1984). This experience convinced Atkin that a reconsideration of what she saw as traditional notions of teaching and learning was necessary. This was the beginning of her role as an education consultant, and the beginning of the development of her inservice program *Teaching for Effective Learning*.

To further her understanding, and to make explicit the processes of learning, Atkin (1992a) drew on research and theories of the evolution of the human brain, the processing modes of its two hemispheres and models of memory which 'serve to enrich our understanding of the nature and process of learning both at a generic and at the level of individual differences in learning' (p. 8). In the list of relevant references from papers and the workshop *Inservice course notes*, Atkin cites the following authors: Bronowski (1956), MacLean (1970), Gardner (1983), Novak and Gowin (1984), Bergland (1985), Sternberg (1985), Ornstein (1986,

1991), Baddeley (1986), Bolles (1988), Herrmann (1989), Moire and Jessell (1989), Springer and Deutsch (1989).

A particular reference for brain hemispheric functioning which appealed to Atkin was Herrmann's Whole Brain Model (1989) because it provided her with an explanation for what she claims she had understood intuitively about the differences in cognitive processing styles of individuals. She states (1990:13) that 'the power of Ned Herrmann's model is that it integrates knowledge and understanding of preferred processing styles, with organising principles regarding the brain function and anatomy'.

Atkin points out that, in developing his four-quadrant Whole Brain Model (1989), Herrmann brought together MacLean's triune brain theory, with the theory of the two *sides* of the brain: the left side as analytical, logical, factual, sequential; the right side as holistic, intuitive, spontaneous and emotive. Herrmann's early attempts to develop his model were based on physiology. Later developments of his model led Herrmann to move to 'a more general, metaphoric one' because

determining precisely which part of the brain was doing what was looking more and more difficult. Researchers were discovering that brain lateralization wasn't as all-or-nothing as they'd originally thought: The operations of the brain was immeasurably more subtle, complex, and versatile than the dichotic model implied (1989:64).

Herrmann's metaphoric four-quadrant model (1989) describes differences in thinking and knowing, and includes an instrument, the Herrmann Brain Dominance Instrument (HBDI) which measures an individual's preferred processing style or styles. Herrmann's Whole Brain Model is represented in Figure 1

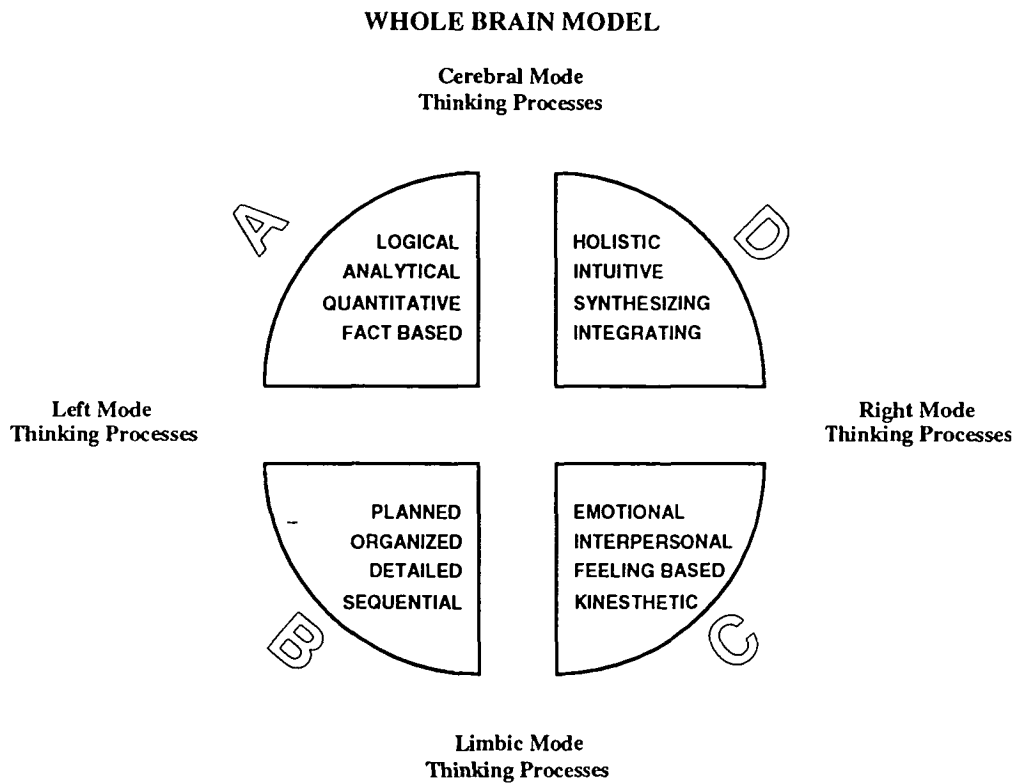


Figure 1: Herrmann's Metaphoric Whole Brain Model (1989). Cited in Atkin (1993:13)

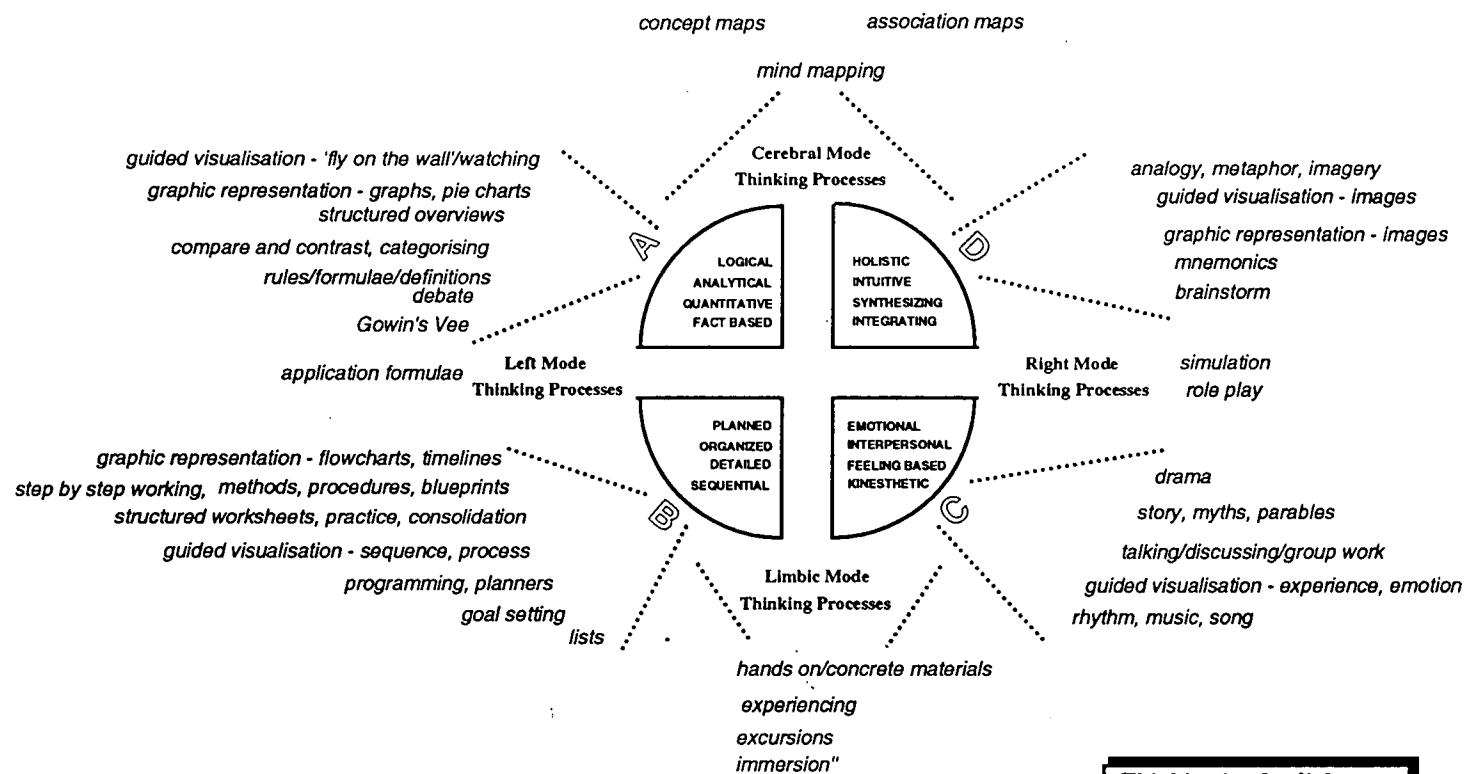
Herrmann's model was described by Atkin (1993:13) as indicating that 'individuals differ in the way they favour or prefer the different ways of processing - the different ways of thinking and knowing. Individuals have preferred thinking styles.' Atkin (1993) also makes the point that 'it is important to distinguish between "preference" and "capability" or "capacity" ' in cognitive processes. For example, she asserts that

[t]he fact that some individuals prefer to process information or solve problems in certain ways does not mean they are not capable of using other modes nor does it mean they are unable to become more proficient in the use of the less preferred modes (p.13).

According to Atkin (1993:13), 'the positive and optimistic thing about Herrmann's whole brain processing model is that it points the way to helping

individuals understand themselves and others and indicates ways in which less preferred modes can be accessed and developed.' For her, the model provided an understanding of how effective learners apply appropriate styles of processing to a given task, and how ineffective learning may occur when people apply their preferred processing style, regardless of its suitability for the task (Atkin, 1993:15).

For Atkin the value of Herrmann's metaphoric model lay in its making explicit different modes of thinking and therefore different styles of knowing, which 'makes possible the deliberate use of strategies to promote and invoke different ways of knowing' (1993:14). Atkin argued that the use of a range of teaching strategies was the means whereby students could learn a range of ways of thinking, in order that they apply appropriate strategies or ways of thinking to a range of tasks. Atkin (1993:18) 'mapped some teaching and learning strategies onto Herrmann's whole brain model to indicate which strategies promote processing in each of the four main modes'. This diagrammatic model (Figure 2) was used as a reference point for many of the activities conducted in Atkin's inservice workshops.



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Figure 2: Teaching/Learning Strategies to Engage Different Processing Modes
(Atkin, 1992b)

An analysis of Atkin's recent writings indicates that the substance of her Framework for Effective Teaching (as disseminated in the *Teaching for Effective Learning* workshops) had its origins in her teaching experiences; it was refined through interaction with teachers in her role as an educational consultant and, she claims, was made explicit through 'psychological and neurobiological research' (1993:3).

The introduction to a monograph (Atkin, 1993) summarises the basis of her thinking about both teaching and learning.

This paper presents a way of knowing about learning and the critical role of thinking processes in learning which is developing from my own experiences as a teacher interacting with learners from pre-school age to adulthood in both formal and informal settings. It has been refined, extended and elaborated on through my interactions with other teachers. It has been shaped and made more explicit by drawing on psychological and neurobiological research. It will be tested through 'sounding it out' against the experiences of teachers and learners. It will be further refined and modified as I continue to draw on more recent psychological and neurobiological research and as I and others, subject it to philosophical analysis. At this point in its development it has passed the test of being both informative and formative for teachers - an acid test for me in my continuing quest to bridge the gap between theory and practice in education (p.3).

Atkin (1993) maintains that her views about learning correspond with a 'constructivist' theory. To support her claim she cites Novak (1990) who argues that people construct their own meanings and understandings over time, based on their background, culture, social interaction and language. Atkin points out that one component of her Framework for Effective Teaching, her *Integral Learning* model (1992), is a constructivist model which enables students to construct knowledge, based on their prior experiences.

Atkin (1994:4) holds that there are two interrelated elements of effective teaching: developing *relationships* between teachers and students and designing *learning experiences* (see Figure 3) - two elements which she describes as the 'warp and weft of teaching'.

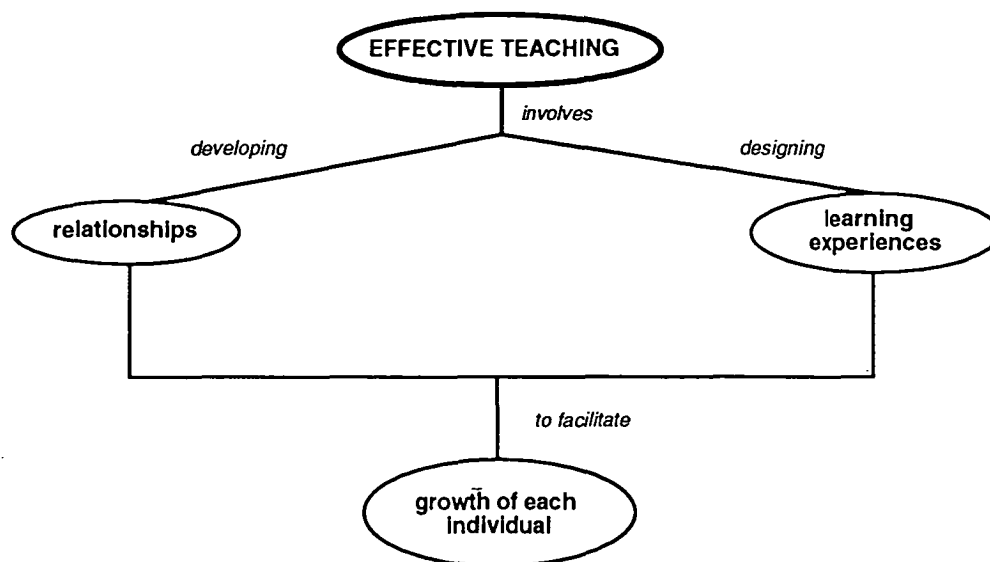


Figure 3: The Elements of Effective Teaching (Atkin, 1993:4)

When designing *learning experiences* Atkin argues that two 'dimensions' (1994:13), namely *psychological conditions* and *appropriate mental processes* should be taken into consideration.

Since *circa* 1993 Atkin has represented her Framework for Effective Teaching diagrammatically as three interrelated components, as shown in Figure 4, with the three dimensions given broader titles: "Human Spirit", "Learning Environment", "Guiding the Learning Process".

It would appear that if one takes a broad overview of Atkin's Framework for Effective Teaching, the three dimensions relate to:

1. the relationships between the learner and teacher;
2. the various external and internal environmental conditions which Atkin describes and psychological conditions for learning, and
3. the mental processes of learning, sometimes referred to in Atkin's writings as "thinking", "effective mental processes for learning" or "appropriate mental processes".

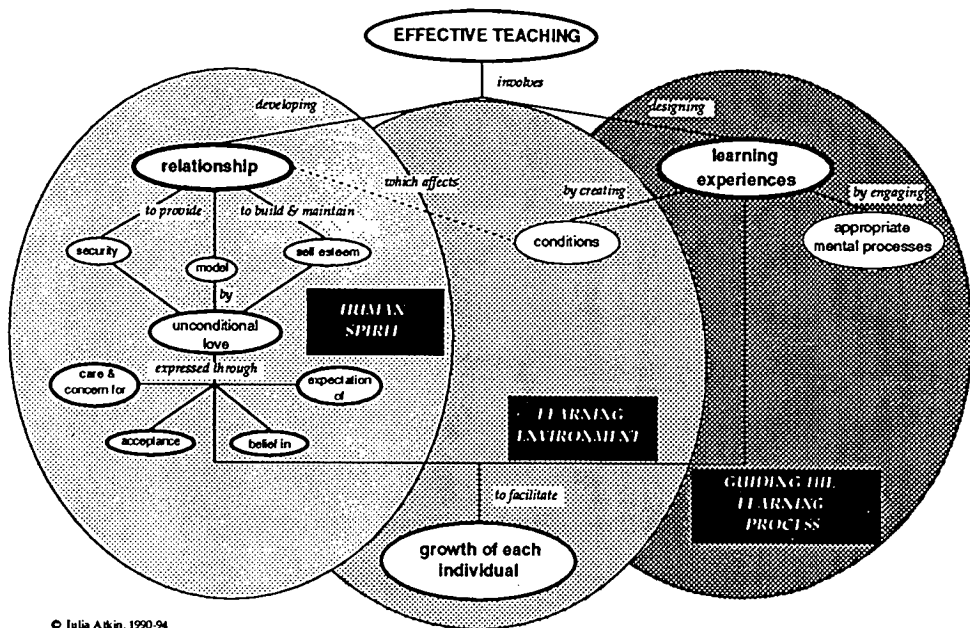


Figure 4: Atkin's Framework for Effective Teaching (Atkin, 1994)

Despite the confusing range of terminology which she uses, particularly in relation to the third dimension, for the purpose of this analysis, Atkin's Framework for Effective Teaching will be described in terms of:

- **Relationships** (contained within Human Spirit)
- **Psychological conditions** (contained within Learning Environment)
- **Appropriate mental processes** (contained within Guiding the Learning Process)

While there are three dimensions to Atkin's framework, there has not always been equal emphasis placed on all three in her publications or inservice workshops. The third: **appropriate mental processes** has been the focus of her work, but one of Atkin's more recent publications (1994) indicates that she is now placing more emphasis on the first two dimensions: **relationships** and **psychological conditions**, than was evident in her earlier writing. While there is

reference to these two dimensions in diagrammatic form in the *Inservice course notes* (1992b), they had received minimal attention until the 1994 publication.

Dimensions of Atkin's framework for effective teaching:

1. Relationships

Good teacher-student relationships, Atkin (1994:5) contends, provide the security which allows students to take risks in the process of learning. The teacher is in a powerful position to enhance or damage students' images of themselves as learners or performers. If a respected teacher accepts the students, both for themselves as people and for their stage of development, and if he or she believes in the students' capacity to learn and expects that learning will occur, and if a teacher models caring, then there can be a growth and flowering of what Atkin describes as the 'human spirit' (1994:8). Atkin points out that good relationships may be more important for those students with low self esteem or with low expectations of their capacity to learn. Those students with a strong sense of self worth and high expectation of their ability to learn may find relationships less significant. According to Atkin (1994)

When a person develops trust and respect for the teacher, the teacher has the ability to have a significant impact on the development and the maintenance of a person's self esteem - the teacher becomes the 'significant other'. The essence of the relationship is 'unconditional love' expressed through care and concern for the learner, acceptance of the learner for who they are and where they might be in their development, belief in the learner's capacity to learn and an expectation that s/he will learn (p.5).

Atkin claims that modelling positive regard for both self and others is a powerful means of establishing good relationships in the classroom. The development of good relationships, according to Atkin, involves the provision of "security", the "building and maintaining of self-esteem", and the 'modelling of unconditional love', expressed through "care and concern", "expectation", "acceptance of", and "belief in" students.

Dimensions of Atkin's framework for effective teaching:

2. *Psychological conditions for learning*

Learning experiences, according to Atkin (1994), need to be designed with what she describes as the **psychological conditions** for learning in mind, 'to facilitate the growth of each individual' (p.5).

Atkin states that she derived her 'picture' of psychological conditions of learning through the use of her own experiences of teaching high school students, the feedback of over 6,000 Australian practising teachers who have attended her workshops, and students and parents with whom she has talked. It is these psychological conditions of learning which she sees as allowing the students to reach their full learning potential. A condition which she found to be 'critical' for effective learning was *motivation* to learn. Further, she states that effective learning 'is characterised by many but not necessarily all of' (1994:10) the following: a *sense of achievement* for the students' efforts; a degree of *freedom* for students to choose, to experiment, to make mistakes and to set their own goals and work at their own pace towards those goals; the students' *readiness to learn*, and *emotional involvement* in the learning.

Motivation, according to Atkin, (1994:9) may arise from a personal need, be intrinsically or extrinsically driven, or it may be stimulated by another (for example a teacher showing enthusiasm). Motivation may be induced by trauma, but could also be destroyed by a fear of failure, particularly if a student perceives a challenge to be beyond his or her capability. She suggests that a *challenge* within reach can be a powerful motivator, but counsels that an achievable challenge for one may be a threat to another. Tangible success from the achievement of goals, with regular feedback on progress and opportunities to celebrate learning, can lead to a sense of achievement.

Freedom to choose, to experiment and to make mistakes necessitates a component of student directed experiences, providing opportunities for ownership of

learning (Atkin (1994). When mistakes are viewed as an integral part of learning a climate which fosters risk-taking can be established. A flexible program which accommodates different levels of functioning within a classroom ensures that readiness to learn, is the basis for planning. 'Emotional involvement, 'engagement', 'excitement', 'enjoyment', 'struggle' and 'determination' are, according to Atkin, conditions for effective learning.

Two graphic representations of the **psychological conditions** of learning are presented by Atkin (see Figures 5 and 6). There are inconsistencies in the terminology of the concept maps, though both appear in one publication (1994). In Figure 5, for example, the middle dimension which represents the psychological conditions for effective learning, while containing some of the terminology of the older (circa 1991) expanded version (Figure 6), also contains terminology which is different.

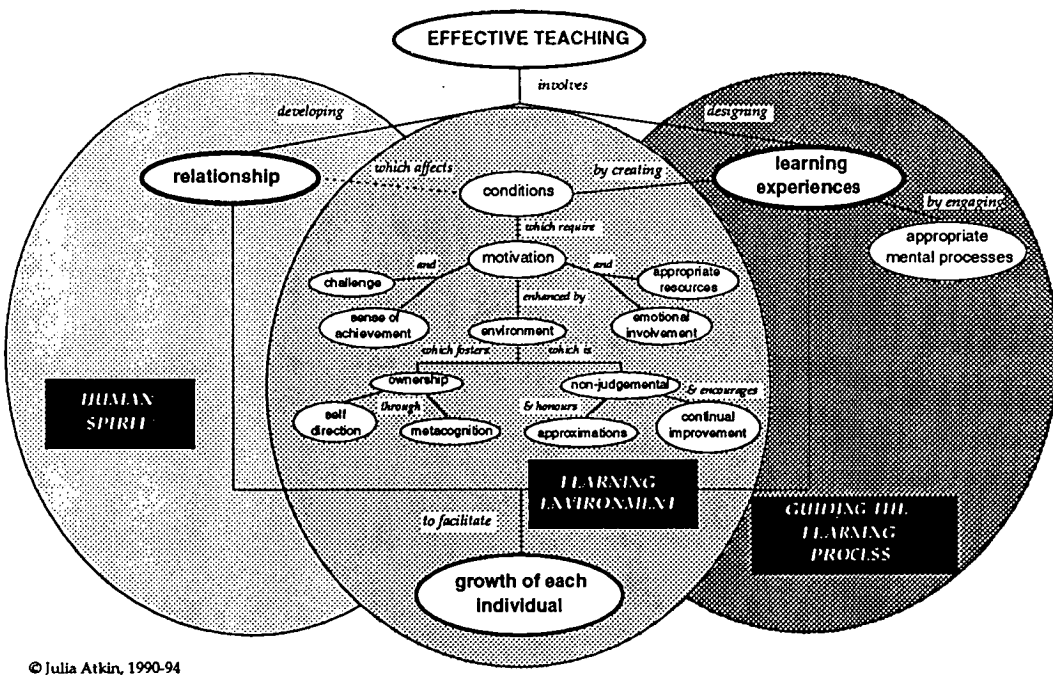


Figure 5: Version 1 - Psychological conditions (Atkin, 1994:12)

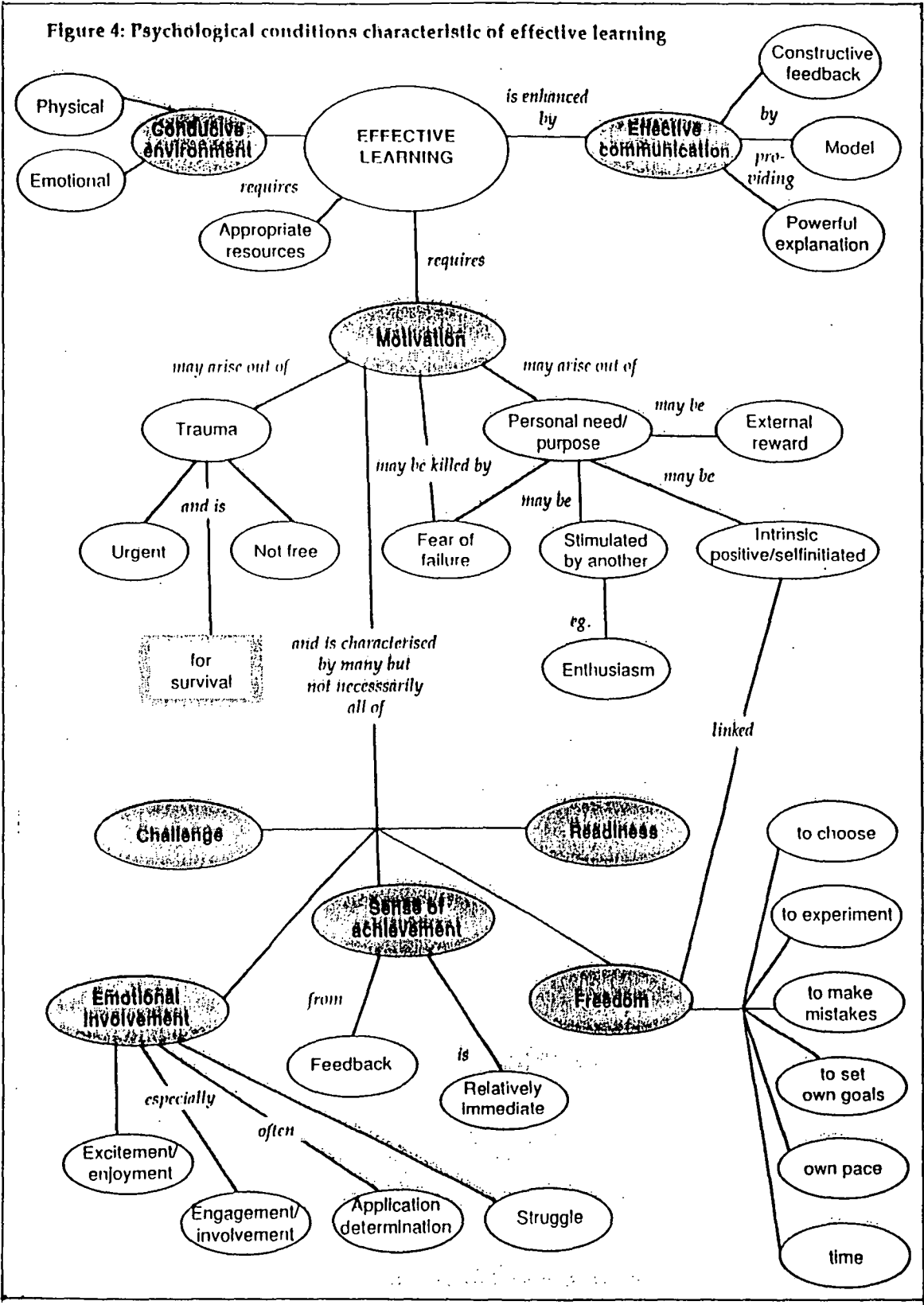


Figure 6: Version 2 - Psychological conditions characteristic of effective learning (Atkin, 1994:10)

In the *Inservice course notes* (1992b) Atkin refers to the importance of a *metacognitive* approach, one which helps students learn how to learn, as one which is important for students who will be adults in the 21st century. Metacognition *per se* is not mentioned in other publications.

Dimensions of Atkin's Framework for Effective Teaching:

3. Appropriate mental processes for learning

The title of a published monograph: *How Students Learn: A Framework for Effective Teaching, Part 1, Thinking - Critical for Learning* (1993) summarises the third dimension of Atkin's framework.

Atkin (1994:13) describes the third dimension of her framework as 'the dimension which makes explicit **appropriate mental processes** for learning and serves to identify what it means to guide the process of learning effectively'. The 'essential elements' of the third dimension, according to Atkin, is 'encapsulated' in the Figure 7, the *Integral Learning* model (Atkin, 1992).

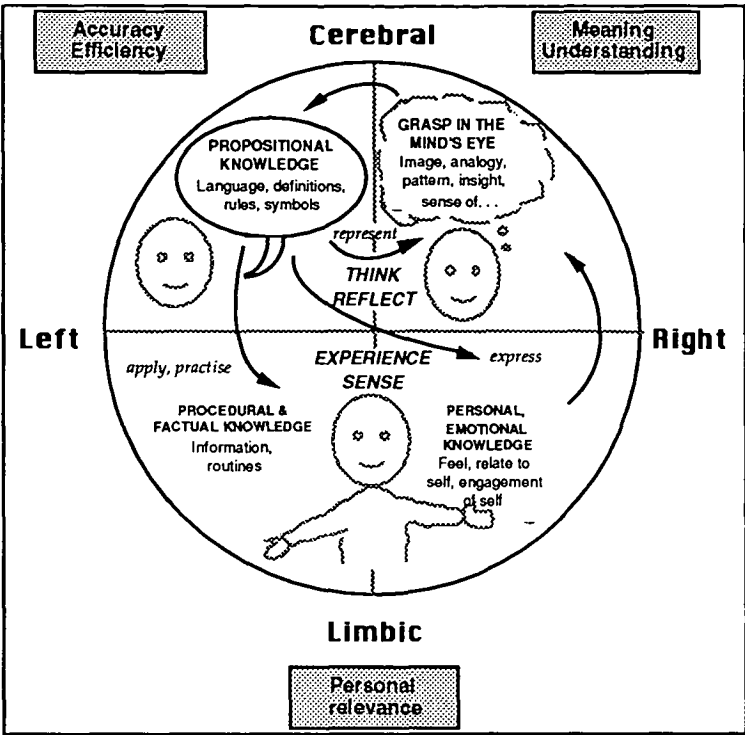


Figure 7: *Integral Learning model* (Atkin, 1992)

The *Integral Learning model*, according to Atkin (1994),

proposes that effective, meaningful learning involves integration of our many ways of knowing - it involves integration of our right mode and left mode ways of knowing and it involves integration of our cerebral/intellectual ways of knowing with our emotional/sensory ways of knowing (p.13).

In 1993 Atkin described the model as being 'consistent with a constructivist model of learning; it is essentially an experiential model of learning, and it is a whole brain model of learning' (p.17). In this statement she makes reference to the term 'experiential' as being derived from Kolb (1984). Kolb views experiential learning as being a four-step process, the first of which is engaging in *concrete experiences*. The learner then reflects on those experiences, and from *reflective observations*, engages in *abstract conceptualisation* which leads to the

development of theories or generalisations. Finally, the learner applies developed theories, in *active experimentation*.

Atkin’s *Integral Learning* model appears diagrammatically in most of her publications, though none of the diagrams are identical to each other and there are differing descriptive titles. For example:

- a) In 1993 (p.17): *Integral Learning - a whole brain model of learning* [Atkin, 1992].
See Figure 8 below.

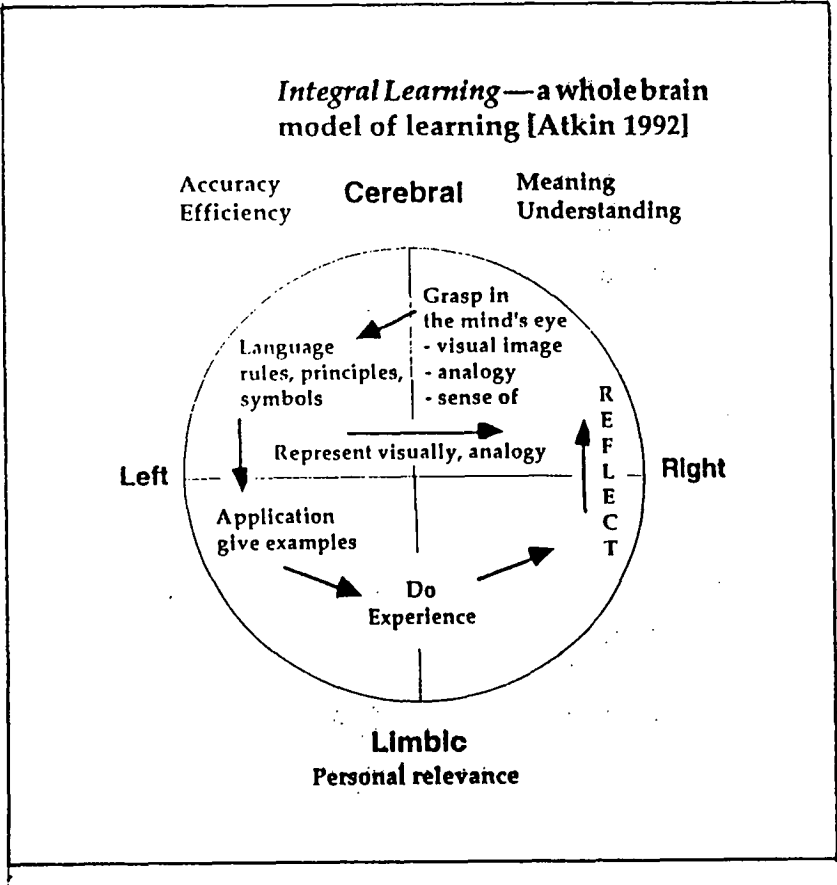


Figure 8: Version 2 - Atkin's *Integral Learning* model (1993:17)

- b) In 1994 (p.13) entitled *Integral Learning - integration of our many ways of knowing*.
See Figure 9 below.

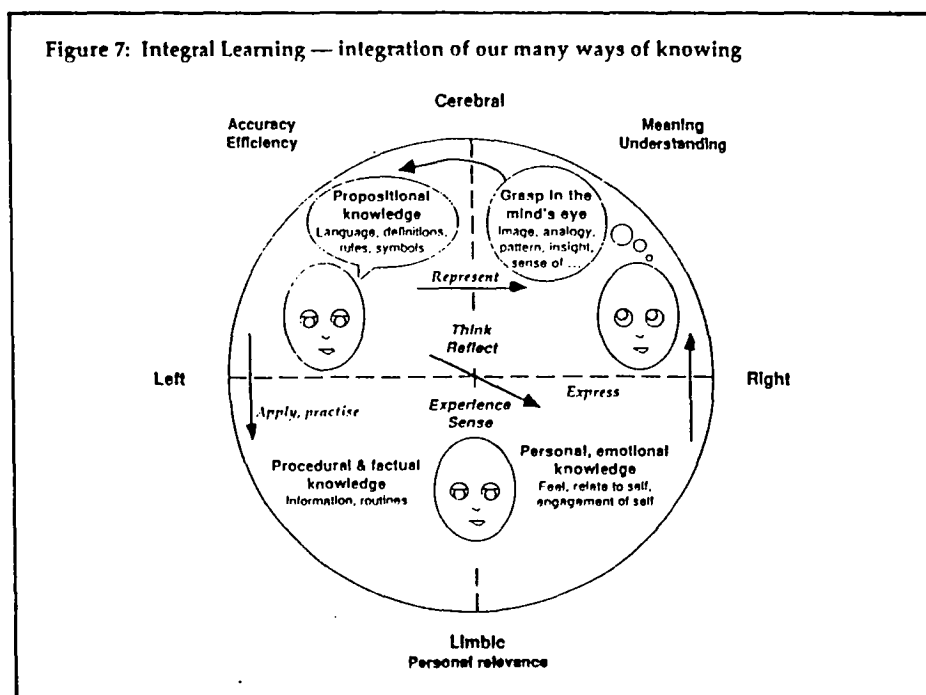


Figure 9: Version 3 - Atkin's Integral Learning model (1994:13)

In developing her *Integral Learning* model, Atkin (1993) drew on the work of Herrmann (1989), Kolb (1984), Bawden (1989) and a constructivist theory of learning. Use of the *Integral Learning* model in teaching, according to Atkin, is a means of engaging appropriate mental processes when learning for meaning. In other words, when learning requires new understanding, new meaning, new ideas or new theories, engaging appropriate mental processes, according to Atkin (1992a), would involve an integrated process which includes personal experience; grasping in the mind's eye; propositional knowledge of language definitions, rules and symbols to represent the ideas, theories or understandings, and procedural or factual knowledge in applying new knowledge. It is this

integrated process of learning which describes the *Integral Learning* model, and is one which closely resembles Kolb's Experiential Model (1984).

Atkin makes reference in her publications (1992a:4; 1992b; 1993:6), and in her presentation of the inservice program, *Teaching for Effective Learning*, to Bawden's graphic representation of Kolb's model. This is represented in Figure 10, which like her *Integral Learning* model, she describes as the "big picture" of learning.

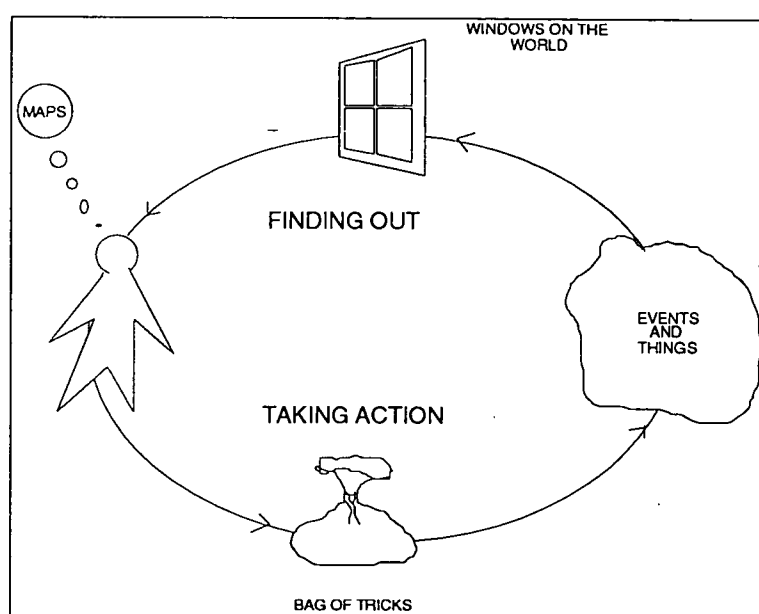


Figure 10: Bawden's graphic representation of Kolb's (1984) Experiential Model of Learning (Atkin, 1992b)

Through her *Integral Learning model* Atkin makes explicit what she maintains will result in effective learning. She claims that

regardless of preferred processing style, learning occurs most readily when the whole brain processing is engaged. The general progression of the process of learning moves from experience to reflection on experience, so that a 'pattern' or framework allows the learner to grasp the meaning of the learning in the mind's eye and finally learning moves on to a facility to use language, rules, laws, principles for accuracy and efficiency in thinking, doing and further learning. The language is a

symbol for what's grasped in the 'mind's eye' which in turn is a mental representation of what has been experienced(1992a:19).

Atkin (1994:18) argues that effective learners, when presented with new information as rules or laws, consciously or unconsciously ask: ' "What is it like? What is an analogy/image/pattern that applies? What is an example of this? How does it relate to other examples/situations I've experienced?" In other words they employ all aspects of the *Integral Learning Model* but not necessarily in the 'general progression of the process of learning' (p.18) which Atkin suggests in the above quote.

The 'essential elements' of the third dimension of her Framework for Effective Teaching are encompassed in her model of *Integral Learning*, according to Atkin(1993:13). However this dimension also appears to focus on the cognitive processes of learning, and in her publications terms such as "thinking", and "effective mental processes for learning" are used along with "appropriate mental processes".

"**Thinking**" is a heading used in two publications (1992a, 1993) relating to the third dimension of Atkin's framework. Under this heading she includes three components: (a) a brief reference to cognitive functioning such as memory in terms of storage and retrieval in sensory modalities; (b) a more detailed reference to two theories of the brain, namely its evolution and the theory of processing modes of the left and right hemispheres of the brain, and (c) Herrmann's Whole Brain model (1989) - a combination of the two brain theories.

"**Effective mental processes for learning**" is a heading used in the *Inservice course notes* (1992b). Under this heading the following are listed:

- Modes of memory
- Some features of memory
 - Sensory Information Storage
 - Short term/Working Memory
 - Implications for teaching practice
- Simplified anatomy of the brain

- How the brain processes information
- Brain dominance
 - What's the basis of brain dominance?
 - Determining your preferred thinking style
 - Brain dominance patterns and learning
 - Strategies for whole brain processing
- Features of long term memory

It should be noted that while Atkin's publications (1990, 1992a, 1993) deal only briefly with the concept of memory, a significant portion of the inservice workshops, *Teaching for Effective Learning*, were devoted to this topic, as highlighted in the *Inservice course notes* (1992b), shown above.

Use of the terms "effective" and "appropriate" to embrace the concepts of this dimension appear to confuse the issue, for while modes of memory and theories of brain function are mental processes, the *Integral Learning* model and concepts such as constructivism and experiential learning, are viewed by Atkin as "appropriate" or "effective" mental processes.

An analysis of the third dimension of Atkin's Framework for Effective Teaching indicates that there appears to be three main constructs which underpin it: cognitive theories of memory, theories of brain functioning and constructivism (and related to the latter, experiential learning).

Part 2: Atkin's Framework for Effective Teaching in practice: The *Teaching for Effective Learning* inservice workshops

In 1992, with Atkin's permission, a series of three, two-day *Teaching for Effective Learning* workshops were video-taped to analyse the content and process of the workshops. The analysis was undertaken with the following aims:

- to identify aspects of the workshops which teachers could be expected to implement in their classrooms;
- to examine congruence between Atkin's espoused theory and practice;
- to appraise Atkin's personal presentation style, to ascertain whether that played a part in the reported popularity of Atkin's *Teaching for Effective Learning* inservice programs.

Methodology

A video camera was established in a fixed position at the back of the room focussed on Atkin alone. No effort was made to make a quality production, simply to record material in order to see the Framework in practice and Atkin's methods of presentation. Because the camera was focussed on Atkin rather than the participants, it was accepted by the latter group. The quality of the technology meant that the participants' voices were picked up only occasionally on the microphone. Some activities were not recorded, but all discussions feedback sessions were.

Analysis of Video-Tapes

The nine tapes were viewed twice; first, to ascertain the content and processes of the inservice program. *Inservice course notes* (1992b) served to clarify points which were not clear from the video-tape transcripts, in particular, references to the overhead projections taken from the *Inservice course notes*. Dialogue was transcribed and the researcher's comments inserted in reference to the overhead transparencies and activities (for a sample of this, see Appendix 3). The second

viewing was undertaken to analyse Atkin's personal characteristics of presentation. This data is presented in Chapter 6. Additionally, an audio-tape recording was made of part of the 1993 workshops to cross-check findings from the video-tapes. This data revealed that a new element was introduced in that year, namely a metaphoric model for describing and explaining Atkin's Framework for Effective Teaching.

Results of the analysis are presented in two forms. First, as a brief overview of the structure of the six days, to show those aspects which could have been implemented between workshops; second, a more detailed description is provided of the content, in terms of how the three dimensions of Atkin's Framework for effective teaching (*relationships, psychological conditions for learning, appropriate mental processes*) were taught. Additionally, Atkin's teaching pattern is described, and a comparison made between the practices of the workshops and the structure of the *Inservice course notes* (1992b).

Structure of the inservice program

In a series of three, two-day *Teaching for Effective Learning* workshops, Atkin aimed to increase the level of professional expertise of educators by:

- raising awareness and knowledge of current research into learning
- helping teachers develop and articulate a Framework for understanding learning which provides organising principles for deliberate design of effective learning experiences
- developing an understanding of learning/processing style and an appreciation of its relationship to:
 - difficulty in learning in certain situations
 - teaching style
 - response of different learning styles to different teaching styles
 - effective learning
 - communication
 - management
- providing opportunities for teachers to develop and practise using strategies which enhance learning
- provide an opportunity for practitioners to evaluate:

- instructional design examples against the Framework of principles for understanding how people learn
- the conditions for learning in their schools/classrooms
(Atkin, *Inservice course notes*, 1992b)

Content of the workshop: Days 1 and 2 (March 6-7, 1992)

In the first two days of the workshops participants were provided with a background to Atkin's thinking about teaching and learning, particularly her views on the meaning of learning, theories of brain function and differences in styles of thinking. A relatively brief reference was made to the dimension of **relationships** in learning and at least one session devoted to the **psychological conditions** of learning. The remainder of the time (and subsequent workshops) was focussed on the dimension of engaging **appropriate mental processes** in learning. Emphasis was placed on individual differences in learning and at least eight activities undertaken to illustrate this point. Two strategies were provided which could have been incorporated into teaching practice after the workshop: (a) a structure for evaluating planning to ensure that a range of learning styles were catered for, and (b) visualisation strategies for spelling. Additionally, a worksheet (checklist) was provided for participants to evaluate their school, in terms of the **psychological conditions** for effective learning. The concept of "whole brain" learning was introduced through Herrmann's Whole Brain Model (1989). To encourage transfer of skills and knowledge, Atkin suggested that teachers complete an action plan, to commit themselves to implementing some aspect of the workshop, and she strongly emphasised the importance of collegial support in implementing what she had taught. No time was allocated in the workshop for completing an action plan.

Atkin stressed the importance of teachers being able to articulate a theory of learning, to counteract the criticism that they can be faddish in their pursuit of professional knowledge.

I have noticed that teachers get bagged a lot and this concerns me. It also concerns me that as a profession we are not firm and clear about

what we are on about. We tend to be a bit faddish. The only way to come out of that is to have a clear theory of learning. "Here's my theory of learning, this is why I am doing this in the classroom". A doctor would never be told how to do their job, but we [teachers] suffer from it all the time. Therefore we have got to be clear about how kids learn and then what our practices are in relation to that. How does our practice match theory? One reason for this is that the theories given in college are other people's theories, not your own. Therefore in these workshops I draw on all your experiences to pull together a theory of learning which comes from that and collected together with work I've done with other teacher, and it is powerful because it reflects experience and it reflects practice. We need to get beyond guesswork in practice (Source: Transcript of video-tape, 1992).

Atkin also argued that 'we can't leave learning to chance' and 'this course is about being deliberate about what we do'.

Content of the workshops: Days 3 and 4 (April 24-25, 1992)

The first session of the second workshop was devoted to feedback. Teachers were asked to respond to the following questions:

- Since March, what have you done differently or more deliberately?
- What thoughts and reflections have you had since March?
- What sort of influence did those 2 days have on your teaching professional practice?
- Is there anything you value differently?
- What questions do you have?

The following summarises typical participant responses.

- Frustration from insufficient information. Did not have the "big picture".
- Lack of professional support.
- Some successful attempts at visualisation for spelling.
- Most reported heightened awareness of differences in thinking styles of both students and staff.

Much of this workshop was devoted to theories of memory and Atkin's model of *Integral Learning* (1992), and at least ten activities were undertaken to illustrate concepts. Atkin informed participants that this, and the following workshop, would contain a large element of strategies for classroom use, which would allow them to apply the principles espoused in her Framework for effective teaching. Teachers, she claimed, would learn to use strategies, when to use them, and why they were using them. Atkin consistently used a reiterative process to revise concepts and to build a "big picture" of her Framework for teaching.

Strategies taught and rehearsed in the second workshop, which could have been implemented in the classroom were: (a) visualisation and guided imagery for spelling art and writing, (b) upside-down drawing (Edwards, 1979), (c) Gowin's Vee (1984), (d) structuring groups according to their thinking style preferences, (e) mind and concept mapping, and vi) "predict-observe-explain". Two sessions were devoted to a variety of uses for visualisation, and the concept was revisited on many occasions. Teachers' awareness of themselves as facilitators of learning, explored through metaphor, was a key issue of the workshop. Atkin asked teachers to write an action plan for implementation of some aspects of the workshop before the final two days, six months later. While time was allocated for the action plan, the activity was not structured, the time was taken up with informal questions and answers and participants appeared more interested in discussion than the action plan.

Content of the workshops: Days 5 and 6 (October 2-3, 1992)

Like the previous workshop, an entire session was devoted to feedback, and on this occasion there was a higher incidence of implementation reported, the most frequently reported use being visualisation, followed by “mind” and “concept” mapping. Teachers again claimed that an understanding differences in learning was of value. No teacher mentioned a conceptual understanding of Atkin’s Framework. Five participants reported having successfully taken professional development programs with their staff on aspects of the Atkin Framework. A large proportion of this workshop was devoted to discussion of issues that had arisen for the teachers.

Aspects taught in this workshop which could have been implemented in the classroom were: (a) two de Bono (1970, 1985) strategies (PMI, 6 Thinking Hats), (b) analogue drawing (Edwards, 1979) and (c) questioning skills.

Teaching the dimensions of Atkin’s Framework for Effective Teaching

It should be noted that while the Framework describes three dimensions, observations in the workshops revealed that Atkin did not present these three areas with equal emphasis. Minimal reference was made to **relationships** other than to make points concerning the importance of relationships. The second area, **psychological conditions** of learning was addressed in an activity and subsequent debriefing discussion. The third area, **appropriate mental processes** proved to be the major focus of the workshops.

1. Relationships

Atkin addressed the concept of the relationships between teachers and their students through anecdotal stories of her and others’ teaching experiences. Throughout this process Atkin referred to an overhead projection of a concept map entitled ‘The nature of the teacher-learner relationships which enhance learning’ (see Figure 11), which was also included in *Inservice course notes*.

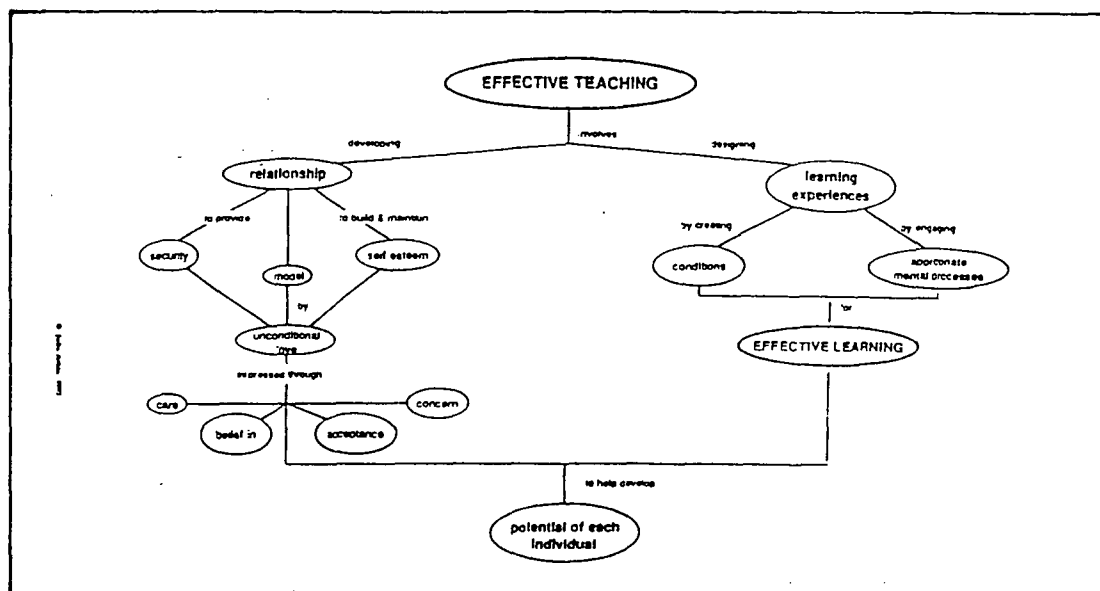


Figure 11: The nature of the teacher-learner relationship which enhances learning (1992b)

Atkin argued for the importance of maintaining a balance between relationships and designing the learning experiences. She stated that

Some teachers have good relationships with their students but don't reach their full potential as a teacher because they haven't done learning experiences well. There are others who do [learning experiences] well, but their teaching may not be effective because they do not pay attention to the relationships. When I taught at Uni, and to some extent in schools, I used to pride myself that my teaching was effective because of what I did (learning experiences). I thought that was the critical component. While it is a critical component, I have come more recently to pay far more attention to [relationships] (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

Reference was made to the term "unconditional love", and Atkin acknowledged that some teachers found the term difficult.

While some are uncomfortable with this term because they see it in the sense of altruism, I don't see it as extreme as that, but as "expressed through care and concern for the learner, acceptance of the learner for who they are and where they might be in their development, belief in the learner's capacity to learn and an expectation that s/he will learn." (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

Atkin raised the issue of the significance of relationships for people with differing levels of self esteem, and asked participants in the workshops: 'If the self esteem is good, does the child depend on relationships for effective learning?' The issue of a teacher's belief in students as a significant factor in successful learning was discussed. Speaking from her personal experiences, Atkin said:

I found from personal experience that my belief in students was the characteristic that they remembered: Atkin cited examples of statements made by previous students in her classes to support her claim. "You gave me the impression that I could do it" (from students). But you have to have learning experiences in place (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

Atkin expressed her belief that, 'workshops on "security" and "self esteem" for teachers were important 'and this will in turn flow through to the students.'

Though Atkin stressed the significance of teacher/student relationships, only a small percentage of the workshop time was devoted to this topic. However she claimed that 'while relationships may not be the focus of the workshops, don't think that it is not important' (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

2. Psychological conditions for learning:

In the *Inservice course notes* (1992b) the psychological conditions for effective learning were listed as *motivation, sense of achievement, freedom* for students to choose, to experiment, to make mistakes and to set their own goals and work at their own pace, *readiness to learn, emotional involvement* in learning, and

metacognition. In her other publications (Atkin, 1984, 1990, 1992a, 1993, 1994) *metacognition* is not included as a psychological condition for effective learning,

These psychological conditions were introduced to participants through an activity set out in the *Inservice course notes* (1992b). Participants were asked to:

Think of an effective learning experience in your life.

- What did you learn?
- When was it?

Relive your experience for a few moments.

What factors seemed to be critical in making it an effective learning experience?

Share your ideas with others in your group and listen to them telling you about their effective learning experience. See if you can come up with a list of factors which made your experience effective (Atkin, 1992b).

Atkin summarised the activity by comparing the list of conditions generated by the participants with Atkin's own concept map which she pointed out as one 'that had been built from the same activity conducted in similar workshops over approximately a five year period'. A lengthy discussion ensued, relating largely to the topic of motivation. Dialogue focussed particularly on what Atkin maintained were two potentially negative effects on motivation: "competition" and "time pressure". The concept of competition was illustrated through the following activity. Participants were provided with small heat sensitive dots to place on their hands, prior to being given a problem to solve under conditions of competition and restricted time. The dots were designed to indicate stress levels through changes in body temperature. Subsequent discussion covered such issues as the positive effect of competition on some individuals, and the implications of the experiment on teachers' practices in the classroom.

Atkin used MacLean's Triune Brain Theory (1970) to explain what she described as the principle of "downshifting", or the human capacity to resort to more instinctive behaviour, particularly when under threat.

When we are under threat it is as if we “downshift” towards relying on our more primitive brains, both limbic and reptilian - we become less flexible and are able to call on only part of our brain for learning’ (Transcript of video-tape of Teaching for Effective Learning workshop, March, 1992).

3. Appropriate mental processes:

The concept of “mental processes”, was a dominant focus of the six days of the workshops, because Atkin contended, ‘it is the element which is most neglected and least explicit,’ and because ‘my way of knowing about human learning [is] not fully captured by any of the other models alone’ (Source: Transcript of video-tape, 1992).

The concept of mental process was addressed by Atkin in a variety of ways over the six days, and included such topics as: the defining of learning, learning in schools, memory, effective mental processes for learning (including theories of the evolution of the brain and its hemispheric functions), Herrmann’s Whole Brain Model (1989) and Atkin’s model of *Integral Learning* (1992). The topics were not necessarily taught in that order, in fact an iterative process meant that they were all revisited on a number of occasions. The relationship between the model of *Integral Learning*, functions of memory and theories of brain function were explained in the workshop, though it is doubted that many of the participants fully grasped the concept, as none were to mention it when reflecting on the workshop in subsequent interviews.

A diagram, shown only in the *Inservice course notes*(1992b) and used frequently as an overhead projection throughout the five of the six days of the workshop, is shown in Figure 12. This diagram ‘shows one way of picturing/modelling how we gain information about the world, our environment, through our senses and how the information is translated and interpreted by our brain to form various aspects of memory’ (*Inservice course notes*, 1992b). According to Atkin, this diagram represents the “small picture” of learning, while her *Integral Learning* model represents the “big picture” of learning for meaning. Concepts taught in this section were taught following a pattern used for all concepts, described in the next section.

In teaching the first two of the dimensions of her Framework for effective teaching, Atkin made no reference to research. When teaching the third dimension, recognised researchers such as Novak (1984), Gardner (1984), Ornstein (1986, 1991), Springer & Deutsch (1989) and were cited, though Atkin had a tendency to say: 'Recent research shows...' or 'They think that ...' while not necessarily naming specific research studies or giving details of the studies to support her assertions.

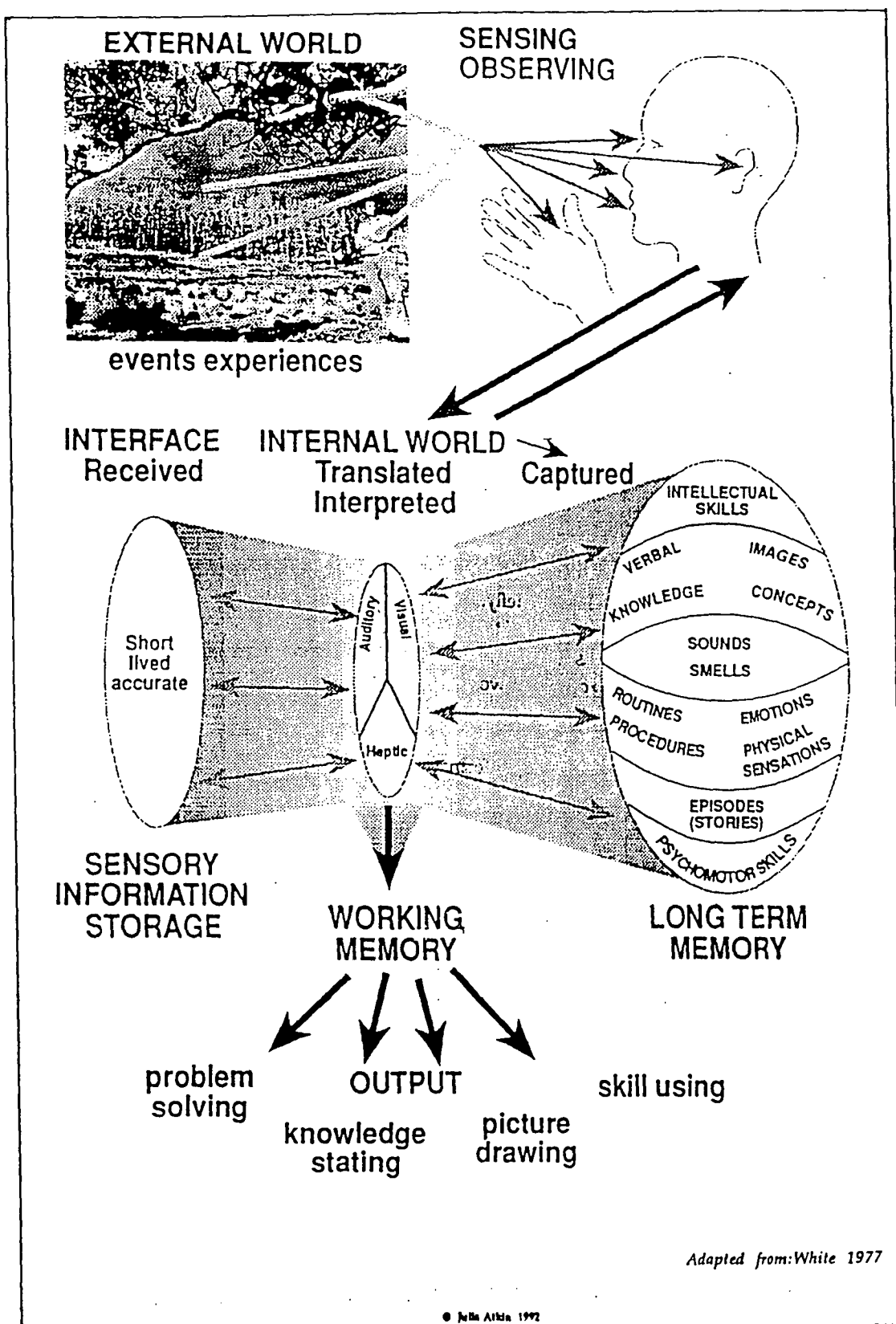


Figure 12: A model of the human memory system (Atkin, 1992b)

Atkin's teaching pattern

Analysis of the transcripts indicated that as each concept was taught, Atkin used a specific teaching pattern. First an activity was undertaken, or Atkin made reference to the teachers' prior knowledge of classrooms, their students or life experiences. A discussion followed, often with Atkin asking questions which led to reflection on those experiences. Theoretical issues followed, and finally application of new learning was discussed. An example of this process was seen in the way Atkin dealt with the concept of "learning".

To introduce the concept, Atkin asked participants to represent their own understanding of learning, first as a definition, then in the form of an image or analogy. She then collated definitions and visual representations on a white board. Discussion focussed on the different representations of people in the group and how these differences may have arisen. Participants were asked: 'How do you think the learners you teach perceive learning'? Visual and verbal responses from this group were subsequently compared with examples collected from participants in similar workshops, which had been documented in the *Inservice course notes* (1992b). Next, Bawden's (1989) graphic representation of Kolb's Experiential Learning Model, (1984), was presented visually as one which represented Atkin's own understanding of learning. Theoretical issues of learning, such as Ausubel's (1968) definitions of "rote" and "meaningful" learning, and theories of different styles of learning were introduced. An overhead transparency of a concept map symbolising Atkin's understanding of learning (Figure 13), taken from the *Inservice course notes* (1992b), was used as a basis for discussion on how the participants understanding of learning may affect their future practice.

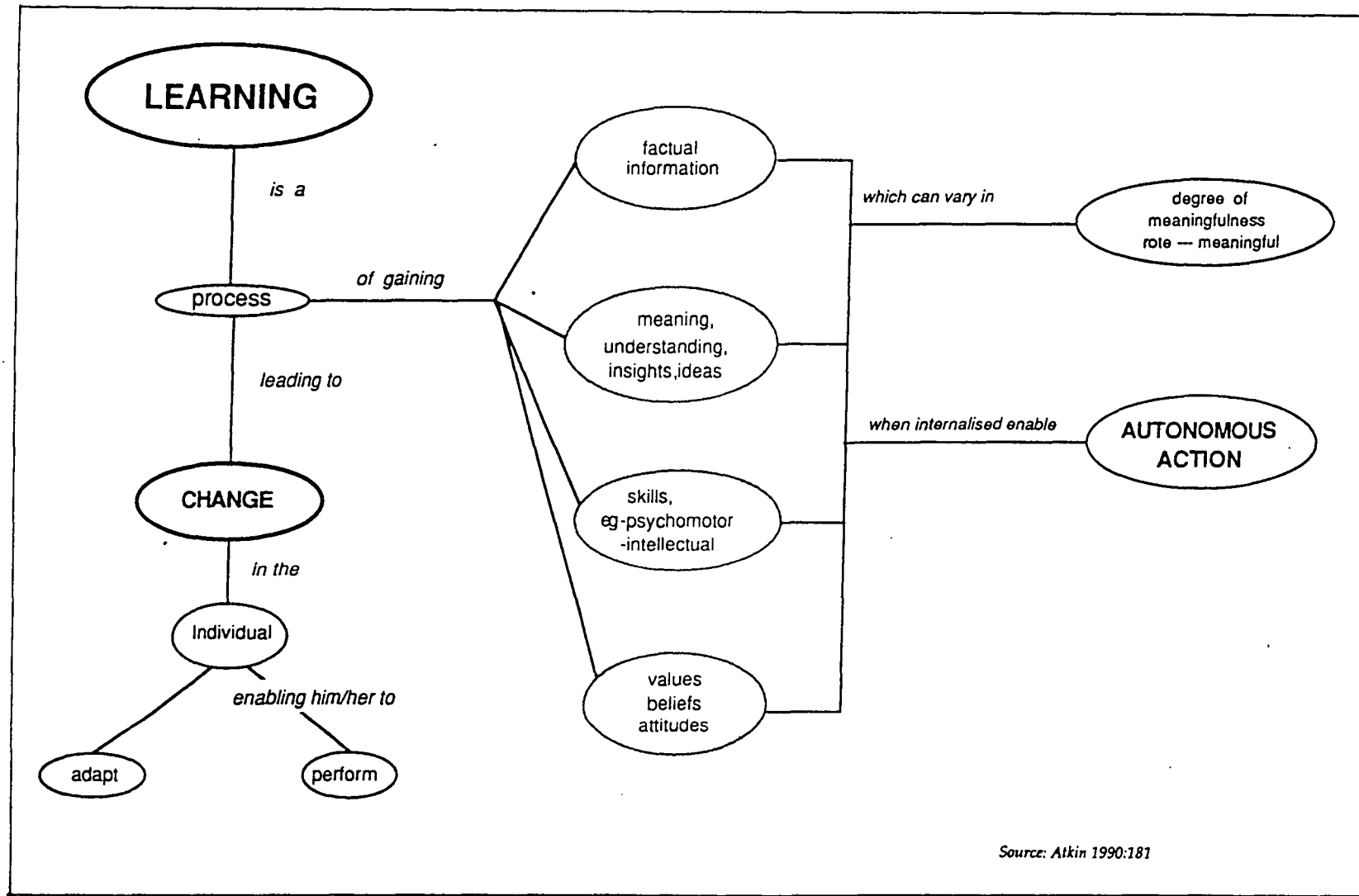


Figure 13: What is learning? (Atkin, 1992b)

Source: Atkin 1990:181

A number of strategies were taught in the *Teaching for Effective Learning* workshops for classroom use. As the activities/strategies were introduced to participants, the graphic representation of Herrmann's model, overlaid with 'teaching/learning strategies to engage different processing modes' was used as a consistent reference point. As indicated in the diagram, strategies are organised according to four areas, namely A: Left /Cerebral Mode Thinking Processes; B: Left/Limbic Mode Thinking Processes; C: Right/Limbic Mode Thinking Processes; D: Right/Cerebral Mode Thinking Processes. Some strategies are also deemed by Atkin to engage both Cerebral Thinking Modes, both Left Modes, both Limbic Modes and both Right Modes. In a box with the diagram, Atkin claims that: 'Thinking is "nudged" by the following teaching strategies

- questioning
- challenges
- games
- posing problems
- design process
- predict-observe explain

A total of 38 types of teaching strategies are listed in this graphic representation. The following six groups of strategies are listed for A mode (Left/Cerebral Mode Thinking Processes), which were designated as analytical, logical quantitative, fact based:

- guided visualisation - fly on the wall/watching
- graphic representation - graphs, pie charts, structured overviews
- compare and contrast, categorising
- debate
- Gowin's Vee.

The following six groups of strategies are listed for B mode (Left/Limbic Mode Thinking Processes), which were designated as planned organised detailed and sequential:

- graphic representation - flowcharts, timelines
- step by step working, methods, procedures, blueprints
- structured worksheets, practice, consolidation
- guided visualisation - sequence, process

- programming, planners
- goal setting
- lists

Application and formulae were teaching strategies deemed by Atkin to engage both A and B modes.

The following five groups of strategies are listed for C mode (Right/Limbic Mode Thinking Processes), which were designated as emotional, interpersonal, feelings based and kinaesthetic:

- drama
- story, myths, parables
- talking/discussing/group work
- guided visualisation - experience, emotion
- rhythm, music, song

Hands on/concrete materials, experiencing, excursion, immersion were teaching strategies deemed to engage both B and C modes.

The following five groups of strategies are listed for D mode (Right/Cerebral Mode Thinking Processes), which were designated as holistic intuitive synthesise and integrating:

- analogy, metaphor, imagery
- guided visualisation - images
- graphic representation - images
- mnemonics
- brainstorm

Simulation and role play were teaching strategies deemed to engage both C and D modes.

Concept maps, association maps and mind mapping were teaching strategies deemed to engage both A and D modes.

Approximately six strategies from the above list were taught, in the workshops though it should be noted that visualisation and guided imagery are listed in all four sectors. Teachers were invited to analyse their own practices in terms of strategies they used and the extent to which these strategies engaged all thinking processes. A sheet was provided for this purpose.

While many of the activities were listed in the content page of the *Inservice course notes* (1992b), many more were provided as handouts for teachers to add to this document. These activities (though not in the Inservice course notes) were similar to, and consistent with the theoretical Framework she was presenting. Atkin selected particular cognitive strategies that she asserted would promote the use of each of the four modes of thinking. However, she did not explain how each particular mode of thinking was triggered by the use of a strategy, for example, the different activation which would occur for the use of analogy, metaphor or imagery (D), as opposed to story, myths, parables, drama (C). Nor did Atkin explain the theory underpinning each strategy in terms of research from the field of cognitive psychology. There was no explanation as to why specific strategies were taught in the workshops, such as their significance in relation to triggering neglected modes of thinking, or that teachers were least familiar with these strategies.

Addition to the inservice workshop since 1992

In 1993 Atkin introduced a metaphor to represent the aims and course content of her *Teaching for Effective Learning* inservice program. It is described here because some teachers from the 1993 workshops were involved in this study, and because it had an impact on the thinking of at least two of the participants in this study.

In her metaphor, Atkin represented the teacher as a gardener, designing and working in a garden. The gardener needs three major elements: a design or blueprint of the whole garden, a number of plants and a set of tools. He or she will need to have knowledge of the individual plants if they are to grow most effectively, and knowledge of how the set of tools will facilitate growth. The blueprint for the garden will illustrate how the elements and principles of design

come together to create a harmonious whole. In terms of Atkin's Framework for effective teaching, the blueprint is an understanding of the nature of learning and what the teacher is trying to achieve in the classroom overall. The teacher (gardener) needs to have knowledge of themselves and knowledge of the individual students (plants) in terms of learning styles preferences, the student's stages of development, and their current knowledge, understanding and skills. a set of strategies (tools) will help the teacher achieve the goals of learning. Atkin represents her metaphor visually in Figure 14.

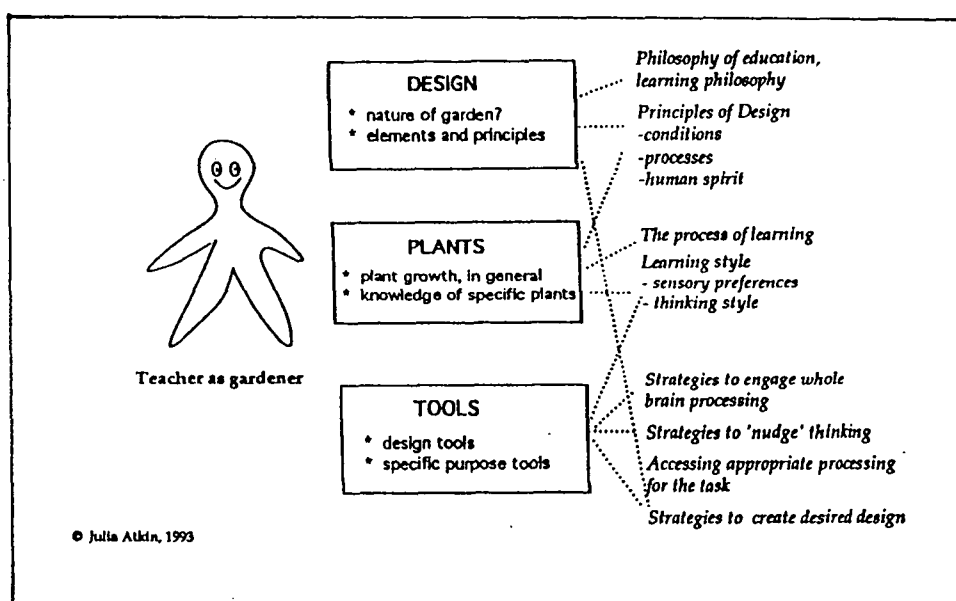


Figure 14: Teaching for Effective Learning Course Elements (1993)

Using this metaphor, Atkin exhorts the participants to create their own "garden designs" (classroom environment and goals of teaching), rather than expecting her to provide a blueprint. These designs, she maintains, will vary from "gardener" to "gardener" and will be based on what they believe in, and are trying to achieve. No two "gardens" will be alike, but with appropriate "elements and principles of design", quite different plans can create a 'unique and harmonious whole' (Source: Transcript of audio-tape of *Teaching for Effective Learning* workshop, 1993). The workshop, she feels, are designed to help

participants build a knowledge of themselves, their interactions with the “plants”, and help them use “tools” (strategies) to facilitate effective growth if individuals and groups.

The Inservice course notes as a practical guide to theory and practice of the inservice program

The *Inservice course notes* (1992b) used in all Atkin’s six-day *Teaching for Effective Learning* workshops took the form of a ring-back folder, the spine and cover of which were inscribed with the name of the workshop and its presenter.

Conceptual structure: The folder contained ten sections, each separated by coloured plastic dividers. The sections and their sub-sections, presented at the beginning of the *Inservice course notes*, were as follows:

Overview	<ul style="list-style-type: none"> - Aims <ul style="list-style-type: none"> - Program - Effective Teaching? - Course outline
Developing a Framework for understanding how we learn	<ul style="list-style-type: none"> - Conditions which enhance learning - Effective mental processes for learning
Checklist of principles - implications for teaching	<ul style="list-style-type: none"> - Checklist - Evaluation of conditions for learning
Integral Learning	<ul style="list-style-type: none"> - A whole brain model of learning <ul style="list-style-type: none"> - Designing for Integral Learning - Evaluating of instructional design
General strategies	<ul style="list-style-type: none"> - Structuring groups <ul style="list-style-type: none"> - Herrmann Thinking Styles
Exercise	<ul style="list-style-type: none"> - Assessment and evaluation
Grasping in the mind's eye	<ul style="list-style-type: none"> - Imagery, Analogy, Metaphor <ul style="list-style-type: none"> - Simulation, Role play - Recognition of a known pattern - Visualisation <ul style="list-style-type: none"> Guided visualisation/Mind journeys Reading comprehension
Strategies to engage appropriate processing	<ul style="list-style-type: none"> - Predict-Observe-Explain (POE) - Learning by design <ul style="list-style-type: none"> - Games - Spelling - Effective writing - Effective drawing
Graphic representations	<ul style="list-style-type: none"> - General <ul style="list-style-type: none"> - Mindmapping <ul style="list-style-type: none"> Association maps Concept maps - Gowin's Vee - Other graphic organisers
Personal Reflections	
Action Plans	
Appendices	<ul style="list-style-type: none"> - Atkin, J.A., <i>New ways of Knowing: the missing link in curriculum reform</i>
reform	<ul style="list-style-type: none"> - References

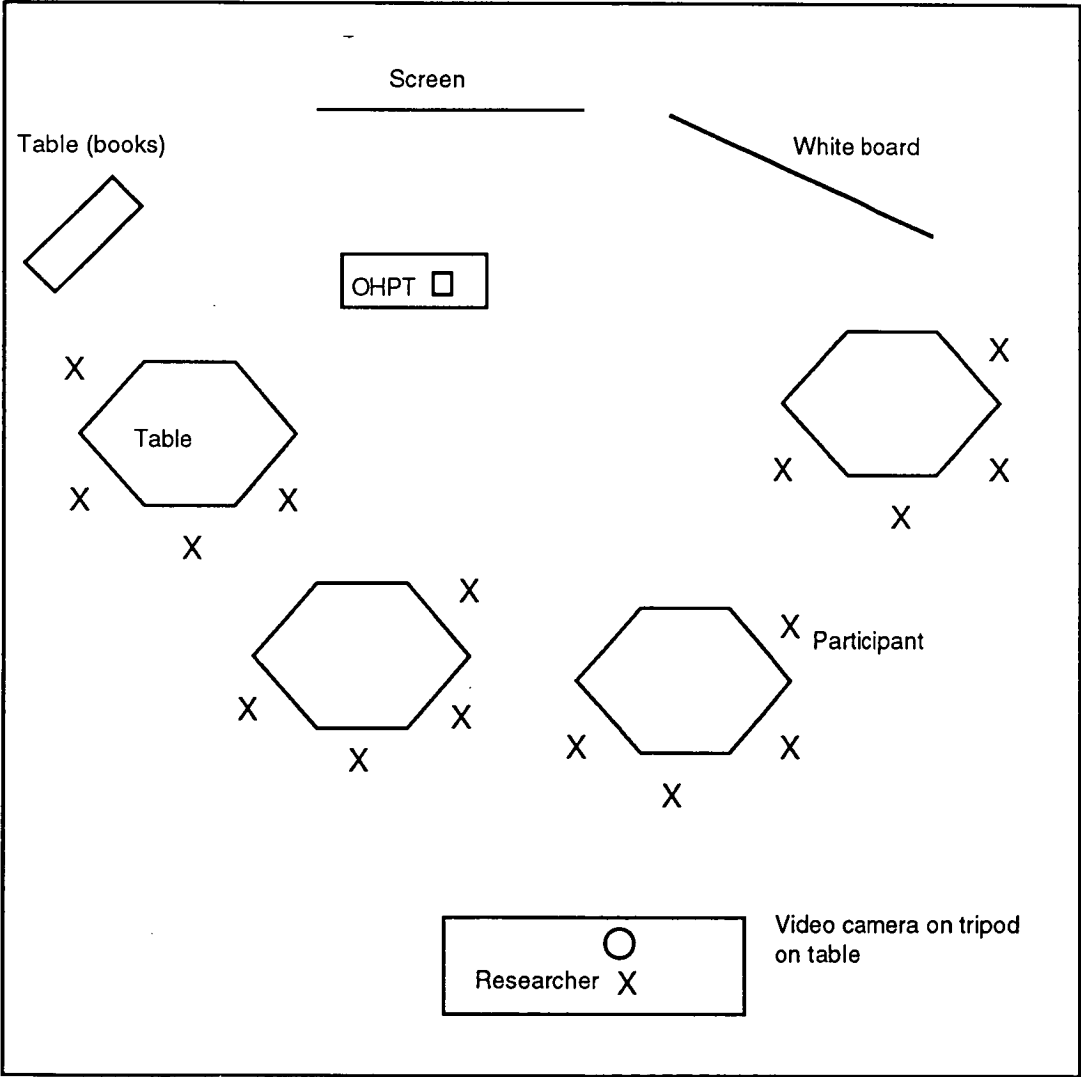
Handouts of relevant information were inserted into the appropriate section as the workshop progressed. These handouts included both theoretical

information, worksheets and descriptions of activities conducted in the workshops. Approximately 40 percent of information was inserted into its sections at the start of the workshops, with the remaining 60 percent provided as each topic was addressed in the workshops.

While Atkin's Framework for effective teaching consists of three dimensions, the *Inservice course notes* did not present these three areas with equal emphasis. For example the dimension of **relationships** appeared in a concept map, but there were no activity sheets or notes specifically relating to it. The dimension **psychological conditions** for effective learning, which Atkin sees as necessary for effective learning, were addressed in a section: "Checklist of Principles - Implications for Teaching". The mental processes of learning were emphasised in the *Inservice course notes* - six of the above sections containing aspects of the concept. These included the topics of "learning"; "memory"; the "evolution of the brain and its hemispheric functions"; "whole brain learning"; Atkin's *Integral Learning model*; designing learning experiences to correspond with this model, and strategies to engage appropriate mental processes for a range of tasks. The *Inservice course notes* differed from Atkin's other publications in that a large section contained notes and activities relating to sensory memory, short-term memory and long-term memory within a 44 page section entitled *Developing a Framework for understanding how we learn*, and she directed considerable emphasis to this topic in the workshop activities.

The manner in which the *Inservice course notes* was used in the workshops was ascertained through video-taping a series of workshops. It was found that the *Inservice course notes* did reflect the content of the 1992 program. However, in practice, the order of some processes was different, and there is no indication of the relative weight given to each element taught. Only two aspects of the *Inservice course notes* was not used in the workshops, namely information regarding the significance of timing in recalling information from long-term memory, and a section on "enterprise" education and skills. While the document contains some notes, particularly on brain function, memory, and the model of *Integral Learning*, it consists mostly of work sheets completed as part of the

activities, and strategies to illustrate points and for teachers to use in the classroom. It was not intended as a reference to those who had not attended and is unlikely to be useful in that capacity.



Sample of video-tape transcripts of the *Teaching for Effective Learning* workshops, conducted as three, two-day workshops spread over a year. The transcripts were of Atkin's speech only. Researcher comments are in italics.

Workshop 1: 6-7th March, 1992

Atkin's motivation

I am trying to improve the quality of learning in schools and help teachers do that. My motivation goes back to school days. I was always in the corridor (*shows OHPT of cartoon representing Atkin as a student*). I wouldn't sit down and shut up. When I got back into teaching I was very concerned about those who get 48/100 while others are very satisfied - 98/100 (*OHPT - cartoon*). I started to ask: What are these people doing when they get 98/100? What could I do to help the lower achievers become higher achievers? I found that the low achievers were trying just as hard as the others, but not achieving.

Atkin's background

I started with a science degree - majored in organic chemistry, but found in honours year I was very brownd off with chemistry research (5 minutes to have an idea, 5 years to test it), so travelled for a year to England and Europe. I was then invited to return to run chemistry teaching labs. I found that in the labs that when students wanted to understand something they tended to come to me to ask for an explanation. If they wanted to know **what** to do they would go to any demonstrators in the room, but if they wanted to understand they gravitated to me. I started asking what am I doing when I explain to them? I must be doing something. If I can uncover what I am doing then maybe I can help others learn to do it.

I went to Cornell - completed teacher training begun in University of New England. Jo Novak was professor of Educational Psychology. He kept asking me why I wanted to be a teacher - he's a real educator - and I went on about what my thoughts were about how people learn, and he encouraged me to do a PhD into how

people learn. Since then I have been trying to describe very clearly what makes good teachers. Some of the insights are forming a pattern. It's complex but it's a pattern like a tapestry. Also it's what good learners are doing and trying to help other learners do what the good learners are doing. In the last 16 years, that's what I've been doing. What you will find is that I'm not telling you much that is new. I'm trying to describe what it is that good learners are doing.

My PhD research was very cognitive. What's actually going on here (*points to head*) At that time it was hard to study that, because at that time in America it was the era of the black box - Skinner days - if you rewarded them, they did it again. If you punished them they didn't. I believe that there is something in that but it's not the whole picture. I wanted to get inside the black box (*points to head*), but people said "don't do that" - that sort of response, but I proceeded.

Cognitive psychology at that time was what goes on in here (*points to head*), and was in its infancy - there was not a lot to draw on. There was a little bit and it gave me some way of explaining what I was doing in the classroom.

When finished the PhD went to University of Philadelphia and taught chemistry. Then I spent a year on Kodiak Island in Alaska. I feel that I learned more in that year on Kodiak Island than any other learning experience of my life. It was an incredible experience. It made me look at learning in a different light.

I returned to Australia and taught science, initially in a school in Canberra - 900 boys - grades 7-12. I found highly motivated students. Public servant mentality. Get the ticket - get the job. Anything which made learning interesting, enjoyable and easier for them they lapped up. It was easy teaching - a good start. Then I went to Harden and faced country kids. Harden is a rural town of about 2,000 population. The kids had a rural mentality, most of the kids not interested in going out of town. They don't look much beyond Harden. I started with about 70 kids in secondary class. There I found grade 7 kids bright eyed and bushy tailed, and grade 10 students hiding behind the church. If you wanted them to come to class you had to drag them in. This made me start asking a lot of other questions about learning. Why are these kids turned off? What do we do to them? OK so they do get a big dose of hormones, at that time but is there anything we can do to meet their needs at the time rather than keeping on doing something that obviously wasn't effective.

That led me to throw out all the traditional notions I had about classrooms and teaching and learning, and started all over again with them. I went through a rapid learning curve with that group and I'll share some of what I did with them later on. But it eventually turned them around. Basically they were now controlling the learning process, and I had to get back to a point where they were motivated. I worked from there. They were turned around and other teachers started asking: "If that was happening in that grade 10 science then can we do that in other areas?" We then went through a big review process in which we undid everything we were doing and built it up again in a deliberate way. As a result of that other schools started asking me to work with their schools. Not the same as with Harden but their own version of reworking what they wanted for their own students. I worked with a lot of NSW schools and some interstate.

Then I had 2 boys and depending on the state of my stomach I was engaged or not engaged in work outside home. As J became an age when I could work more full time again I decided to bring the focus back to understanding more on learning. The reason for bringing my focus back to was that I found a lot of schools changing structures, e.g. giving students choices, to make things better, but I found in some instances there were some aspects of things which were better, but in many cases it didn't change anything about the interaction of minds or interactions of values and attitudes of teachers and students in the classroom. So we therefore need to focus on the teaching/learning process as well as looking at overall structures. This is where this course has grown from - an attempt to bring together what I have learned about learning in the past 16 years and help others grapple with that.

For me what has been made more exciting about the work is that in 1975 when I was trying to work out what was happening in here (*points to head*) we didn't know a lot about the human brain - but we now know quite a lot about it - it might be the tip of the iceberg starting to get a biological physiological basis for things. As physiological/biological knowledge starts to come together - it becomes a much more powerful model of learning. That's where we are going - looking at an understanding of learning from that point of view and that insight.

That's a very long winded description of my background but at least you know where I come from, and at the beginning I'd like to lay in front of you, the assumptions on which I operate. I'll invite you to comment on these as to whether you identify with these or not. These are not in your notes because I'm trying to capture some of my thoughts and feelings.

Assumptions from which Atkin works (*dot points on OHPTs*)

From my experience teaching and working with people I think that:

- Humans have an innate desire to learn.

I believe that it is an innate thing. We don't have to provide it - it's there. Maybe sometimes we may not be nurturing it but it is there. Another thing that drives a lot of what I do in terms of learning and understanding, I also believe that

- Intrinsic motivation holds the key to human self improvement.

Not the human individually, us, humans collectively. If we can tap our own internal or intrinsic motivation, than that is what human improvement is all about. Not doing it with the big stick - the external reward. Two other assumptions I've worked with all along but haven't always been explicit about is that

- There are many different forms of intelligence.

This what Kodiak Island did for me. I came from a very academic background and was put into a survival mode on Kodiak Island and realised that in terms of all the human capacities how many different ways there were of being intelligent. It really brought that (*points to OHPT*) to the fore. And you were in a very broad learning environment, not just a classroom and that really was a very powerful learning experience for me. there other forms of intelligence. The other thing goes back to the cartoon (*48/100 and 98/100*) - the fact that I was saying that I think that I can move those people (*48/100*) to (*98/100*.) indicates that

- Intelligence is not a fixed thing.

We can all become more intelligent. Increasing our intelligence in some form. Certainly it is not fixed, something we are born with or not.

I have a strong agenda because I have noticed since coming back into teaching I have been concerned because (a) because teachers get bagged a lot by the external world, and this concerns me that as a profession we are not very good about being firm and clear about what we are on about. We tend to be a bit faddish - this way and that way. The only way to come out of that is to have a very clear theory of learning. "Here's my theory of learning, this is why I am doing this in the classroom, and this is what I expect as an outcome of that." An we haven't had that. A little while ago I had a mole cut off the side of my face, and as I was lying there I was thinking there's no way a doctor would allow someone from outside to tell them how to do their professional job. They would never let a

politician tell them what to do. Education has that all the time. We suffer from other people telling us what to do. So one of my strongest agendas is to say we have got to be clear about how kids, how people learn and then what our practices are in relation to that. How does our practice match out theory? One reason for this is that the theories given in college are other people's theories, not our theories. Therefore in these workshops, particularly the first two, I draw on all your experiences to pull together a theory of learning which comes from that and collected together with work I've done with other teachers in a similar situation, four or five years I've been building a theory of learning which comes from that and it is powerful because it reflects experience and it reflects practice. We need to get beyond - to take the guesswork out of teaching. So to sum up (*OHPT - cartoon*). We've got to get beyond the guesswork as a profession and gain the professional reputation that we deserve.

Another part of what we will be doing in the next couple of days is to help those who have not had time to get up to date with the latest theories of learning in a very practical way. As can be seen in the media - things are happening fast in terms of new understandings about learning and the brain, and things like the use drugs in terms of the brain (*OHPT cartoon - drugs and thinking*). It won't be long before we have drug testing before exams.

So the message is trying to get rid of fads and trying to make clear what we are doing. Today we will spend a lot of time building up a framework for understanding learning then move into applied mode.

Overview of 2 days

Turn to last page of the section you're in, after the aims. (Puts on *OHPT* of concept map of course outline -see Figure... - and goes through it in terms of her intention for the workshop). If I could outline the way I've designed the course. It doesn't necessarily flow in a linear way. First giving an overview. Then spending the rest of the day developing a framework for understanding how we learn. As we develop that there will be a whole lot of principles emerging for understanding learning and then implications for teaching practice. In terms of applying the framework that will be this afternoon will be understanding yourself as a learner and teacher, and then taking that out to understand other learners. Then how to design learning experiences to engage what I call the appropriate processing, and conditions for learning. And you'll also have opportunity to evaluate what you are currently doing and take steps towards thinking of ways you may like to change

that. That reflection page, for people that like to take notes, may find that that reflection/action page gets very full. You won't be able to pick up all those things and start thinking about things you want to do between now and April. Tomorrow afternoon we'll hone it down a little bit and we will write down the things I'd like to develop in my teaching practice and I'm going to focus on before next month - what are the things I'd like to before April and pick up and develop an action plan for that. Through the course as a whole we'll look at strategies which enhance learning. You'll get a chance to practice those - to plan, design and use them in your learning environment and then do follow up work when we get back together. Each of the stages will have more of this (*strategies*) and looking at what you've already been using and what sort of effects you've had from that.

Cartoon to summarise getting away from fads - sums up what goes on in education

As a group I hope we can get away from the fads.

Framework for Effective Teaching

OHPT - concept map for EFFECTIVE TEACHING

What I have to think about when I'm running a course such as this is to ask what constitutes effective teaching? To me it has 2 main sides to it. One part is about developing relationships and the other is designing learning experiences

Some teachers who have a good relationships with their students but don't achieve their full potential as a teacher because they haven't done this part (*learning experiences*) very well. There are others who do this bit well (*learning experiences*), but their teaching may not be effective because they do not pay attention to the relationships. When I taught at Uni level and to some extent in schools I used to pride myself that my teaching was effective because of what I did over here (*learning experiences*). I thought that was the critical component. While it is a critical component, I have come more recently to pay far more attention to this side (*relationships*). While we don't spend much time in the course in this aspect I want to make a solid point about it. (Describes from concept web) To me the relationship part is about providing security, it's about providing a model. I'm often reminded about how effective models are when my 2 get into all sorts of trouble at pre-school for the things they say like "damn" and "buggered". And it's also to build and maintain self esteem in individuals. So these things seem to me to be necessarily in tact for people are to be

able to open up and learn effectively. I use the term "unconditional love" to express the nature of the relationships. Some people have trouble with that term because they look on it because they see it in the sense of altruism - regardless of what you do it will do this for you. I don't take it as strongly as that. It's more that this relationship is expressed this way - through showing "care", "belief in", "acceptance" of the individual - to let them be, and a concern for them. This is what I mean by "unconditional love".

Strong connection between self esteem and belief in is illustrated in story about the family in New Zealand. *(lengthy story about sister, mother and her in New Zealand)*. Made me far more aware of the critical nature of the relationship side of teaching particularly the belief in. It made me a lot more aware of the relationship side. Though I don't put anything in the course to show you how we can achieve this it is a critical component of effective teaching. You might like to think in your own youngsters. Is it something which is critical all through life or is it age dependent? *(This is the first time participants have been invited to contribute - Atkin listens attentively and uses reflective listening. Thanks participant for their contributions)*. Self esteem is a crucial aspect, but we've got to think of the role of the teacher in building that. You're saying Brian that it's critical for learning. If your self esteem is high do you depend on a relationship with the teacher for high self esteem? *(Extensive and animated discussion between participants and Atkin- uses their names - checks that she is using the correct name)*. Working behind the 8 ball if the self esteem is not there. So may be context related - at school I am believed in...school can be a safety place. Strong link between security and self esteem.

(Summarises what participants have said and weaves their names and responses into her comments). The thing that I couldn't get over about students who kept coming back to me after I had taught them - I would ask them: what was it about my teaching that you found to be very effective? They never talked much about that *(learning experiences)*. What they spoke about was this part *(belief in)*. "When I didn't think I could, you make me think that I could, and you showed that you cared and that made me believe in myself". They kept coming back to say how strong an influence that was. I had to have this *(learning experiences)* because there's no point in having a belief in someone if you then can't help the get over learning difficulties. Conveying the attitude of caring relationships is crucial. We all know of teachers we have had where that was important for us.

More participant responses

If you are a leader in your school as part of the evaluation I will be asking you to evaluate how you are modelling, in your school, the whole effective/effective learning theory we will be dealing with.

Comment on governments wanting clever country - going about it the wrong way because they are not paying attention to relationships. Discussion about NSW schools and starting to build in the human element. Participants offering many examples of lack of human relationships in schools - many want to volunteer comments on this topic.

My way of thinking about it is that the younger the student the more important it (*relationships*) are. Always important but more critical for younger students

In summarising Atkin referred to participants' comments: "As Daphne said..." "Brian made the point that..."

Some teachers come back to me and say: yes I believe in that, but how do I do this when I have a class of 30? I think you breathe it in your very being. I don't mean spending 10 minutes with everyone in the class. It's your whole approach. Inservice could focus on this (*relationships*) where the security and self esteem of the teachers could be addressed and this in turn will flow through to the students.

It's been a great discussion because we all recognise how important this (*relationships*) is. One of my dangers is that while I focus over here (learning experiences) people will think that I have forgotten about relationships. I haven't - it's very much a clear part of the whole picture. While relationships may not be the focus of the workshops (the learning experiences is the main focus) It's about how you design learning experiences, by creating the right conditions and by engaging appropriate mental processes. I believe that if we get that part (*relationships*) and that part (learning experiences) right that's what I mean about effective teaching.

Morning tea break

Atkin draws the groups attention to the section in the Inservice course notes: "Developing a framework for understanding how we learn"

When I came back to working in schools the early 80's it fascinated me that, while schools were institutions for learning, no-one talked about learning. They made all these assumptions about learning. The first thing I want you to do is to think about what you mean by the term "learning". I want you to put your response into words, also to think an image or analogy (what's it like?)

Explains how she has structured the Course Notes to use the boxes when doing an exercise.

First your own response and then sharing

1500 - A working with groups. Moves around tables. Kneels so that at the same height as seated participants. Spent about three minutes with each group. Listens attentively - smiles. Lots of laughter. Signals that she is about to leave each group by standing up but continuing to respond for about another 30 seconds, then departs to next group.

(Lists key words on white board- uses different coloured pens. Some discussions of words as they are being recorded, then draws images from participants responses to images of what learning means to them. Lots of laughter and discussion about the images. Refers to participants by name).

Lots of people use an analogy of "growth" - discusses why this is effective. Others talk about "sponges" - what is your responses to that? Discussion.

A's comment re "growth". The brain grows in response to stimulation. Old theory that you have your brain cells and they die off (particularly as you drink your alcohol) but there are certain brain cells that grow in response to stimulation.

Refers to statements and images in Course Notes which have been collected from previous Teaching for Effective Learning workshops. Shows them on OHPTs

OHPT - cartoon of students' thoughts about learning. When I talked to children in the 80's, they thought that learning was writing down what teachers put on the board - it was chew and spew - I had a hard time making them realise that when they were living they were learning. They were not using any of those words (points to white board list). What I find in schools now, 8 or 9 years later, students are aware that some learning is chew and spew, but they

know that it should be like that (*points to OHPT cartoon*). They know how they should be learning. Maybe that the effect of primary schools changes coming through. There is a greater awareness.

OHPT: Bawden's version of Kolb's Experiential model of learning (page 5 of the second section)

Those of you who are involved in study and needing to know other peoples theories, I like to put some names on this. This is a pictorial representation of Kolb's Experiential model of learning, drawn up by Richard Bawden, dean of the Faculty of Agriculture at Hawkesbury. Will bring in the ABC tape of the Bawden Experience. What he is saying is pretty much what you were saying - that we learn through our experience, we build up a window on the world as we reflect on that experience, as we go through the process up there (*points to OHPT*) - thinking about or reflection - we build up mental maps for organising our experience - as you have done there (*points to words and analogies on white board*) and then we build up a bag of tricks for taking action and being able to do, and then we re-experience, re-reflect. It's more like a spiral revisit and refine. We go in a continuous revisiting, rebuilding, refining. Some want to make it more complex and show more spirals that spiral in on each other. It goes on for ever. An example of mental maps is in a story: A man and his son were driving along in a car and they had a serious accident. The father was killed instantly, the boy was rushed off to hospital and when he was taken into the operating theatre the surgeon said "I can't operate on him, he is my son." Who is the surgeon?

Fifteen years ago most people thought in terms of male surgeon - Mental maps now - people easily think of the surgeon as female (the boy's mother). Mental maps are powerful organisers to help us make sense of new experiences but they are also limiting/restricting (limited version of a surgeon). When de Bono talks of lateral thinking he is talking about getting out of one mental map and using different ones different, escaping from the power and restriction of one and getting a new perspective.

This (Bawden's model) is a very macro view of learning. To illustrate the way in which that map making is part of human nature, I want to show you some overheads.

OHPTs - *Paris in the spring; creating a star from within a series of shapes- to illustrate how we make mental maps* - The brain completes the pattern. We recognise what we think we know even if it is not reality.

Maps also build up our window on the world, our way of experiencing the world - to make sense of the world. They in turn affect the way we perceive the world. If we travel we see the different mental maps or windows on the world of other cultures. Macro look at learning. What we will look at is the reflection - what is going on. *Invites discussion.* Brian - what would you like to do with that?.

Discussion

I would like to add social interaction which isn't on it (Bawden's model). We often learn in communities. Other maps affect my map and window on the world. If you experience and blunder. and don't reflect then you may repeat it. - not adapting.

Another way of summing up learning is concept map from p.6 - (OHPT "What is learning?") - an attempt to sum it up in a verbal propositional way. The key part is down the left: Learning is a process leading to change in the individual, enabling him or her to adapt and to perform. (*reads from concept map*). What are the processes that lead to change? Let's tease it out - the things you gain in the process. (*Points to white board of participants' responses*). It's something Greg said earlier - it's "multi-modal", and someone else said "information" and "understanding". We learn lots of factual information, we might learn a phone number as a fact. We gain meaning understanding, insights, ideas. We learn skills, for example psychomotor and intellectual. Someone suggested the other day adding social skills which are both inter- and intra-personal skills. (*Some discussion ensued about what were cognitive or affective skills and how relationships fitted into this model. Atkin mentioned Howard Gardner's model - different modes of learning*). And we also gain values, beliefs and attitudes. The interesting thing is that if you look at these (points to left side of concept map) we learn in different ways. Think about how you learn information - detail, invariably you still bring in a pattern. Think about how we teach the alphabet. The alphabet is detailed information which has no inherent order. so what do we do?- we sing songs- put in rhythm or patterns. *Gives more examples*

The nature of learning that (factual information) will be different from learning this (insights ideas), and different again from learning skills. We'll focus on this. What am I really talking about when I talk about using strategies to help learning in different ways. Obviously, often all four of those things (from concept map) interrelate in various ways. They're interwoven in various ways. My concern, particularly in secondary schools is that all of these can vary in degrees of meaningfulness, learning can be very rote or meaningful. My concern is that much learning is at the rote end. How can we move learning to be more meaningful?

Gives e.g.'s from NSW HSC test answers - to show lack of meaningful learning.

There hasn't been a lot of thinking in students' learning. There is for some and those students tend to learn in spite of us. The work I have been doing for the last 16 years is how can I make sure that kids aren't operating at rote level, but more at a meaningful level. Effective learners will operate there anyway. Need to move the others then it will be easier for them. Learning which is meaningful it is easier. Not only because it makes learning more interesting and exciting, it helps students to be more autonomous.

Sums up and weaving in participants' responses on white board.

If that's what learning is - when does it happen effectively? In answering that question I am not asking what is the role of the teacher in this, but it is more, what are the psychological conditions operating for the learner? I may have good relationships with the learner, we have talked about that. When I learn well, what are the psychological conditions operating?

Psychological conditions for effective learning

Activity from p. 8 section 2: Conditions conducive to learning. Gives instructions for participants to do this activity. Do alone first, then share. Atkin moves around tables.

At the end of the section (of the Inservice course notes) there is a checklist of principles which you may or may not want to work with now. It is a little task to build up for yourselves some principles of learning. You might like to use it as you go or you might like to use it as a revisiting activity at the end of the two days. From time to time I might write up something which comes from the group which is an agreed principle of learning - not very often though, because I need you to be making those up, rather than me giving you a set of principles. The activities will let you

tease that out.. To sum up a lot of what has been said in groups I want to share with you the concept map on the next page of your notes (*Effective Learning Concept Map p.9*)

This has been build up from about two thousand responses of people like yourselves, talking about effective learning experiences. The important thing to me is that it is summing up experience. It's much more powerful than someone who sits in an ivory tower and says: "This is effective learning". It reflects the experience of two thousand people. I've refined and changed it as I work, though I find now that it doesn't change much now. The refinement is slowing down, so we must be getting close to what reality is.

For the following 30 minutes Atkin talks to this concept map and gave examples and anecdotes to illustrate each point. The following is not entirely verbatim. Some of Atkin's comments are precised, some verbatim. Atkin weaves participants responses into her talk. Periodic discussion as participants volunteered ideas. All examples closely relate to the participants experiences.

The most critical factor is motivation. Where does motivation come from?

Trauma - in foreign country - can't speak the language. Motivation to learn language is strong. In a car accident. Beginning teachers identify with this. When motivation is trauma stimulated, it is urgent, not free - takes control of you - not you in control. Indelible learning - but I was not in control.

My arise from personal need or reward. Fear of failure motivator. OK if good relationships with teacher - no so if relationships not good.

Teachers sometimes have trouble accepting the significance of fear of failure because they have been successes in the system. I sometime purposefully put them into a trauma situation to make them understand the connection between fear of failure and self esteem.

It used to worry me that students were learning for another - they wanted to please me and that was worrying. But in talking to others and teachers and reflecting on my own learning it made me realise that while I may have done the same it acted as a spring board to learning. It didn't stop when that person wasn't there if the person still has the freedom to have control over their own learning is still there. Unlikely that learning will stop. Sometimes teachers can want students to do it for them - to be liked.

On competition as a motivation: two sides to it. I don't think that people are stimulated to their best performance if they don't have a standard to measure against and that's part of what competition

does, and it's O.K. as long as it doesn't block out. If competition is used to sort out who can and who can't it's a real problem, but then how do you make the best of the competitive aspect? It's in us. I believe I was able to do it in my classroom because competition came in the form of games. There was always a lot of challenge in it, but it wasn't if you don't do it you fail it was more a stimulus activity to get people to do their best.

Relationships interrelate with this aspect (*motivation*).

Human beings have an innate sense of learning. It's part of being human. It's a case of tapping it. If you can tap that, I think it's the key to effective learning.

Sometimes motivation is not deliberate and very conscious. You learn just by being immersed in it. You're not demotivated. You may not have a very deliberate motivation but you are not shut off. In schools end point of learning is not celebration of learning but the judgement of learning and its that mode of operation of schools which drives the nature of learning. It's as if we sit up here and say "sorry you only got this far", rather than saying "how far did you come? let's celebrate that", now how do we get up here. We need a change of perspective - TCE judges - anti learning. We have to stop letting them away with it.

I don't have a problem with setting national benchmarks that we would like students to reach, but we've got to stop saying you've got 12 years to get there by now and in my place and my time. We've got to start saying things like OK what are the pathways that you need to take. So set the goal, help them set their own goals against some standard, but change the attitude, how are we going to get there? We've fixed the structure, primary, secondary, tertiary and you get there in this time. We've fixed the time in which they can do things rather than freeing this up by saying: here are the national benchmarks, here are the goals, let's decide how you're going to get there.

The problem with schools is that they are so politically driven. If you were in another area which wasn't publicly funded you would have the freedom to design a school based on effective learning principles. As professionals we should be arguing for it. and if we had a loud collective voice maybe we could get somewhere. It is starting to happen in industry. There are going to be many different pathways to learning. Here's the standard of achievement we want in the factory in terms of working and here are the ways we can help you to get there and I think that gradually what will happen is that there will be many different pathways that people can take keep learning and as this becomes more of a reality, to get there will be less and less pressure put back on schools.

Lunch

Activity: stress dots given out.

Relaxation exercise- participants check colour of stress dots.

Teachers put under pressure - given time limit to solve an anagram. - Atkin periodically gives time calls.

Check your stress dots. It's sometimes difficult for me to do that activity. That activity counteracts what effective learning is all about. (*Refers to concept map of motivation*) For some there would have been a sense of challenge. For some there is a real sense of threat. Will I make a fool of myself in front of my peers? I'm trying to say that human beings don't work at their best under those conditions. There is quite a bit of thinking about how the brain works in relations to that.

"Downshifting" - negating conditions required for effective learning.

Summarised on p.10 section 2. Triune brain - MacLean. Atkin describes MacLean's theory - neocortex, limbic, reptilian.

How does this model shed light on how we operate? Let's look at instinctive behaviours that spring from reptilian brain. In us all in various forms.

Flocking: see it on the Gold Coast every summer. In workshop settings where people come in who don't know each other. The first thing they do is look around and see if there's anyone I know and if there is, they will go and flock with them, because they feel insecure

Social hierarchy: comes out in relation to children; "I'm your father you do as I say". We resort to pecking order if at a rational level our discussion breaks down

Nesting: at workshops if people are insecure they resort to getting a place organised for themselves and then they feel more comfortable.

Signalling: you see in staff rooms, when tempers may be fraying people look across the room to someone who identifies them, you and eyebrows go up.

Territoriality: *tells story about her son*

Preening: when people are nervous they will preen, pull their hair
Does mating ritual come out under threat?

When we feel insecure and under threat we resort to these primitive behaviours. It's a psychological change called "downshifting", When we are under threat, we move down from our rational decisions making brain into our animal type behaviours. If we are under threat - without security - in learning

we shut off and do not allow our most appropriate mode of learning.

Gives examples from her own experience with her own children. General discussion in relation to teacher stress in schools. Relates Triune brain theory to psychological conditions for learning concept map.

In terms of learning, I don't necessarily have to be positively motivated, but I have to have my limbic system open. It has to be open to allow learning to occur. I must not be turned off or demotivated. But I don't have to be deliberately, consciously motivated. If all channels are open then lots of learning will happen in a natural, easy way. So with all information coming into the brain, it comes up through the brain stem and from there through the limbic system and on into the cortex and back again and all sorts of circles, but it has to come through the limbic system to come up into other areas. So if it's shut off there - I don't like this teacher, whatever it shuts off - a block, and no real learning will go beyond there.

Participant adds a lengthy piece of information - not picked up on video-microphone. Atkin responds:

If you want to read more on this Brian - I haven't read much of his work, but I just catch a message that he's on about just what you're saying. Feuerstein - He was picking up kids in that situation and helping them get beyond that. Called the Instrumental Enrichment Program, I think.

When a participant wanted to pursue a topic Atkin referred to the concept map of psychological conditions of learning and pointed out that he had a level of readiness to learn about that topic but it wasn't what she had planned for the workshop. "If I can give you the big picture, then maybe you can pursue that further".

There are a number of brain circuits. They used to think of the brain as an electrical organ, that there were a lot of electrical charges running through the brain and nervous system. That's still true - it happens. Now they think of it as thought of as a gland. Chemically based organ - chemicals being released. In terms of what's happening here (*points to triune brain diagram*), it's almost as if there is a chemical block or an electrical block at that point. The circuits go up and through the brain backwards and they integrate all over, but the pathway in terms of incoming ... and come back

down an loop around. And what happens when the aha experience - the light bulb - occurs, - it is strongly tied to a powerful emotion it's an aesthetic experience when you learn in a way that the jig saw fits together experience. When there is harmony in all the circuits, there is a loop back through the limbic system which releases hormones that neuroendocrinologists call happy hormones - releases a hormone which gives a euphoric effect. Happens regardless of whether you are learning something or doing something very well. Similar effect from a variety of experiences, caused by this loopback through the limbic system.

Atkin summarised by relating effective learning concept map (psychological conditions for learning) with the triune brain theory. "Brain physiology supports that" and that's what makes a lot of theory about learning very powerful. Brian research is showing us that now.

Sheet - Evaluation of the conditions for learning at your school and in your class. Atkin explains the activity and participants do it, first on their own and second, discuss in groups.

Appendix 4**Interview samples from short-term/long-term interview group**

The following is example 1 of a long-term interview from the **short-term/long-term interview group**.

Interviewer: Thank you for agreeing to this interview. First, I want to assure you that what you say will be kept in confidence, and second, that I am not here to check on your use of Atkin's model. I am just as interested knowing why some people are not using it, and some of the things that are preventing teachers from implementing it. If people are using aspects of it, I would like to know which aspects, and if they see any value in it for them and their students.

Int: I am interested to know whether you think about, or use Atkin's model, one year after you attended the workshops.

J: It's been the school priority this year.

Int: Then you must remember a lot about Atkin's model.

J: The whole staff - and we have continued in that vein. The teachers have all had 6-8 weeks evening sessions working with me, both last year and this year, on planning. We have released teachers new teachers to the school of music teacher and the kinder teacher have been released for a day to work with me and we have come up with plans even with the kindergarten of whole brain lessons and in music. On the whole brain in the quadrants. We are working on whole brain music.

Int: So you have had a lot of support from you principal?

J: We have got lots of support from D.M., the principal. He is right behind it too. So if you've got that, and that interest, it really is important.

Int: So what have you used from the workshops?

J: Very much visualisation, mind mapping. All the teachers mind map right down to kindergarten. In the kindergarten and the preps we have taken them through mind mapping, using symbols rather than words. I have worked and demonstrated - I have done a lot of modelling throughout the school, in classes. Particularly in the grades 1 and 2, they did not believe that it could be done, the children did not have the skills, and I went up and we brain-stormed and we classified, and they're using lots of colour too for the visual learners. Yes, and visualisation. Yes we have done a lot of that, and as I say, the mind mapping.

Int: And have you seen any evidence of changing children's learning and thinking?

J: Yes and excitement.

Int: Teachers and children?

J: Yes, and in fact the children that I taught last year have gone to high school, and I have had phone calls from the teachers saying "What's this mind mapping?". They have noticed the children, before they write, are actually getting in and doing a mind map of what they are doing. So that is really exciting. We use the mind maps, too and I have got examples I think. For before we go into a topic we ask the children what they know, and they mind map it, and then as an evaluation at the end as well. And that is recorded. Many classes use that. Some teachers of course are not as excited as others, but gradually after one year you sort of go in and you see little things happening, like teachers are doing more for catering for children on the right side of the brain.

Int: Can you give me some examples of children whose learning you think has been changed as a result of the Atkin workshop?

J: I have got a boy in my class who has always had language difficulty in his spelling and writing. He does not like reading, but he has been particularly creative, and we have given him lots of opportunities in presenting his

work, not as a written report. He can verbalise it if he wants to, he can put it to music, and because of his confidence there, it has also grown in the other skill areas. We have also used a lot of visualising with him for his spelling, and that has improved remarkably there too. And that is one particular child that I have actually worked with.

Int: You have got grade 6?

J: I have got a grade 6. Three days a week.

Int: So you are picking them up late in the primary school.

J: That is picking them up late in this career. Some children we are working with are younger. A grade 2 child - who is having learning difficulties. The teacher said to me 'He can't read, he is hopeless', and I talked to him about things, and asked him about his bedroom, and he could tell me about home and I said 'oh, can you spell?' and he said 'oh I can spell anything if I see it in colour'. And I put a word on the board "successful" on the board and he looked at it, and we did it in different colours and he wrote it and he retained it. And the teacher was quite stunned.

Int: And he hadn't been able to this before?

J: No. And it was the relationship to colour and the way it was written. And he worked from there too.

Int: Do you have any other examples of using Atkin's model?

J: We have had one of the teachers here who is working very much on the Atkin model. She took an assembly with her Grade 3 children, and before they came and did the assembly, she sat down and she visualised the whole assembly with them. And the success - and that was one of the most wonderful assemblies we have had. I mean the whole thing is just sort of going. And [the students] also feel confident when they are given an open challenge. They know that they can present it in whatever manner they like and it is still acceptable. Maths problems, we have had rapped. You know children will get up there and rap it out and the others will present it in the written form and they all realise it is equally as valuable to that particular child.

Int: So your particular use of the Atkin model is concentrating on the “whole brain” experience?

J: Yes, that is how we have used it the model.

Int: If a parent or colleague asked you to explain the Atkin *Integral Learning* model, would you feel comfortable to do that?

J: I think so (*long pause*).

Int: (*Showing the diagrammatic version of the Integral Learning model*) This is how Julia shows it. Do you remember this diagram?

J: Yes, I think - the cycle, you could work through the engaging, the experiencing, you're reflecting and you're processing and your experiences. It just keeps flowing, developing your own strategies. And in fact I did this. We went to a whole brain maths and we followed this one and worked through it- do the experience and so on. Yes we have done that.

Int: So you are not only looking at four quadrants but you are looking at in terms of using the process of the Atkin *Integral Learning* model ?

J: Yes. And in fact it is one of the priorities and a lot of money, professional development money has gone into it, and it is still a priority in the school next year.

Int: You are getting complete support for what you are doing here. Do you have others from the workshops to discuss what you are doing?

J: I think it is important just to talk over your ideas. Next year, which is really exciting in the school, the two rooms as you come into the school are going to be two grade 5/6s, and I will be on one. Another teacher who is extremely interested and will work with Julia next year is on the other. She is going to the course. We are going to have that as a “whole brain” unit, so that is really exciting, and we are going to develop it together

Int: Have you had any feedback from parents about changes you are making?

J: Parents have noticed changes. We have had parent forums on what is going on in the school, to encourage them. There is not a lot - parents at this school generally are quite happy of things are going well. You don't get a lot of feedback. The one parent came in when I was working on art and thought that was wonderful. One of the other parents has seen it and

have come to me and said 'Look, what is behind it? Tell me'. And the child that I specifically mentioned on spelling - his mother has come in to find out what's going on.

Int: You seem to be very enthusiastic about what is happening.

J: We are excited. And teachers sort of say 'We can do it to music' and music teacher said 'No we can't'. So we had an afternoon, and we got her there and she was doing notation and we went right through the quadrants to the brain - give them experiences - and we built up from there. But she is not here today so I couldn't get hers to show you. And as you can see there is some wonderful planning going on, and some of the teachers sort of say to me 'we can't quite fit this in, it's across everything (*J. is referring to activities ranging across four quadrants*). And I said "That's fine".

Int: So there is anything else you need to tell me then?

J: No, except that it's all very exciting. And we have got - there are a few resisters, as you're sure to get.

Int: That's not surprising

J: Some teachers thought they were doing whole brain, but now they have got some model to put it beside, they can see that they were very much missing some aspects. The teachers that took it on board and did the planning came to me and said 'Look I have written down the activities and I have found that they've really all are left brain. Can you help. Can we brainstorm together to find ways to get into that right brain - those two quadrants'.

Int: Some of the teachers are willing to push themselves?

J: That's right. And they know - and they are saying: 'Well I haven't given so many experiences - perhaps right brain for this... but in my other class - in my maths area I make sure that their preferences are being used.

Int: That must be an interesting way to teach maths.

J: Usually purely text and left brain.

Int: You said last year that you thought Julia practiced what she preached, except when you were a bit embarrassed.

J: At one stage ... the sense of security ... when she was talking to me and I realised that my visual memory is not good and she had me visualising

spelling a difficult word in front of other people I felt embarrassed by that. But that was the only time, and I guess I felt threatened. Apart from that incident - yes, certainly she modelled her theory.

Int: Some teachers are saying is that Julia Atkin's model is making them make sense of other workshop they go to. Do you agree with that?

J: Yes and also it makes you very annoyed with presenters of other workshops. Because you sit back and you think: 'Well they are not catering for everyone very well. A lot of them are left brained and very difficult to take in, but in this school, now, we have people who come in and say: 'I don't expect you to take this on, because we know how right brain you are and it is really good'. We are sort of talking about it a lot.

Int: What do you remember about the workshops which was valuable to you?

J: The fact is that why I enjoyed Julia so much was because I felt right. It was for me. I wanted something and she provided that. It has certainly been wonderful for me, sort of after 15 years of teaching to sort of have this boost.

Int: You wanted to get some ideas to help the students?

J: Yes and I've done that. Yes it is wonderful. It is exciting

Int: Do you think that good teachers are doing what Julia is talking about? Some teachers are saying: Yes I've been doing it all along.

J: Yes, and I have something to base it on and it is not just a feeling. Actually that would reflect in this school too. The teachers who have taken it on board are the teachers that I would say who are good teachers. They are the ones that are coming in and running in and showing me and they are excited by it.

Int: And the students are being helped?

J: I think N. Primary is very under-rated in the region, we are not a big marketing school but now it is happening here.

Int: Did you say that you had talked to others from the workshops?

J: I know I have spoken to some and they said 'No, we have not done a lot', and I think that's a terrible shame.

Int: Do you feel you would like to talk to others more about what you have learned?

J: I need perhaps to sum some things up - to get back and talk about it all. I need some help. I think you need to sort of feed off each other and get that enthusiasm back.

Int: Yes, it would help everyone - to compare notes. Is there anything else you would like to tell me about how you are using Julia's model?

J: No except that we are excited by all this.

Int: Thank you for talking with me

The following is example 2 of a long-term interview from the **short-term/long-term interview** group. It was included because this participant was one of the few critical of Atkin.

Researcher's explanatory comments are in italics.

Interviewer: Thank you for agreeing to this interview. First, I want to assure you that what you say will be kept in confidence, and second, that I'm not here to check on your use of Atkin's model. I am just as interested knowing why some people are not using it, and some of the things that are preventing teachers from implementing it. If people are using aspects of it, I would like to know which aspects, and if they see any value in it for them and their students.

Int: I am interested to know whether you think about, or use Atkin's model, one year after you attended the workshops.

R: I think about it all the time. I honestly do. Most of the children we have out here are the sort of children who benefit from people knowing a lot more about learning styles. Because most of the kids in this school are non-visuals.

Int: Yes?

R: And I have chosen the word "most" advisedly Normally you would say there is a percentage that are non-visual, but in this school there are a lot that are non-visual. Do you remember the E [school] kids you looked at? They were the ones that weren't succeeding - the non-visuals. That was a specific class that had been put together and they included a high percentage of non-visuals because they were the dregs that have been left over, and everybody had their pick and the reason they were the dregs is because they were not the normal in terms of learning mode, they were difficult in class, but nobody bothered to work out why. So I think about [Atkin's model] a lot. I in fact started off the beginning of the year with a staff meeting, showing people the sort of connections that I was going to try and make for what was going on in the classrooms with this sort of material. And that's just as far as I got.

Int: So you did some talking to others about Atkin's model, but didn't take it very far.

R: I am sure the teachers aren't using this model. They might have some vague understanding from what I have already told them, and how I have talked to them about what it is all about.

Int: Have you used any strategies like visualising for spelling or concept mapping?

R: We've done quite a bit of visualising for spelling. And some teachers do visualisation every day now with their students. What I also did to follow up the start of the work - Brendon O'Hara came in here for two days, and did a lot of work, and I asked him to be specific in the areas of spelling and reading in terms of classroom sort of assistance. And we have had some very good results as a result of his work and me adding the bits that I could add from the NLP (*Neurolinguistic Programming*) stuff, and from the whole brain learning stuff, that I was able to give on an incidental basis, more than a really formal basis. And the physical development stuff that Brendon did helped as well. We had good results from the physical as well as from the spelling and reading stuff. But basically it was all involved, it all involved teachers becoming more aware of the processing styles of their kids and then trying to choose a strategy from the visualisation techniques or whatever, that would be appropriate. And some teachers do visualisation every day now with their students.

Int: So visualisation has been built in?

R: Oh yes. It hasn't sort of gone altogether, but it's not directly as a result of the work that I have done from Julia's work. It's a result of the work that I have done from a range of people, and been able to feed in through other opportunities. The teachers here certainly have a bit of an understanding of the Atkin model, and they use aspects of it, the visualisation aspects. They probably understand that kids are different in terms of visual kinaesthetic and auditory. And they understand that most kids who have trouble with reading and spelling are non-visuals. And they are doing a lot of visualisation work. They ... understand the importance of visualisation and

that probably is one skill they build on, but they probably don't have the big picture.

Int: Have you seen any changes in children's' learning as a result of the applying any of Atkin's model?

R: Yes, visualisation.

Int: Can you tell me about that?

R: Visualisation is the key to success in this world. I mean it's no big surprise. If you can become a visual or more visual person, you are almost guaranteed some form of success.

Int: Can you give me any examples of this?

R: My daughter is a good example. P.P. at R. Primary uses a lot of visualisation and C. was at least, I think, a lot like me in terms of her spelling, she couldn't spell to save herself, and her spelling has gone ahead in leaps and bounds.

Int: Has yours?

R: No.

Int: Have you applied it to yourself?

R: Yeah, but I don't visualise. My spelling has come on, but I think it's more because of experience than by visualisation. But hers is. She is getting 18s and 19s out of 20 now and she is spelling at a level, her level, so she has developed quite well. But I know P.P. in that class does visualisation almost daily with the techniques - similar techniques - and it is paying off.

Int: So you use visualisation. Are there any other ideas you picked up from the workshops that you were able to use in the classroom?

R: No, we haven't done any of the concept mapping type of stuff, which I would have liked to have done, but to be perfectly honest with you, I don't believe I understand that well enough myself. It is what I found interesting and would like to have spent more time on. It is where we didn't get a lot of time in the course in the sense is that we didn't get a lot of time on the concept mapping and the actual tools.

Int: Which you would have liked?

- R: Which I want, I want the tools and I am not, and I don't have enough detail on the tools to use it accurately. I mean the idea is just second nature to me. But the tools are a whole different ball game and that's where I didn't feel I got enough out of the Atkin course. It was sort of half an hour on this, and then take off, and a half an hour on that, and I needed to talk some of that through more, and to really sort of look at it because I don't understand the detail. I understood what she was trying to get at, but I didn't really understand the detail and that's why I find it uncomfortable to use a lot of it.
- Int: That's interesting. So you have got a sense of the big picture of the model.
- R: Yes, no problem with that at all. That is I understand that model, I understand the whole concept of whole brain learning. What I don't understand is some of the techniques. I mean I understand the model, I understand the process but some of the techniques I don't have and that's where sometimes I fall down when I want to give it to other people. The overview is easy, the concept of the model is easy. So the model is simple. The model I had in two seconds flat.
- Int: So if a parent or colleague asked you what the Atkin *Integral Learning* model was, could you explain it?
- R: I know what it is and I could probably have a go at explaining it but I doubt whether I would do it very well.
- Int: So you would have difficulty summing it up?
- R: Well I can sum it up in the sense of - I can, in the sense of the diagram, and of the four quadrants of the diagram, and I can explain to people what the four quadrants were all about, and how they link. So I can do that in terms of, sort of giving people an overview of what processing is all about, and how different people have different preferences, and how that works. I can do that, but the people I have discussed it with - because they don't have a great deal of background - don't tend to make too many links out of that. They are ringing some bells, but that's as much as it rings, and the diagram that we used with a kind of a window and filling up a bag of tricks (*R is referring to Bawden's visual representation of Kolb's Experiential Learning model*),

that I can describe that to people. I mean I have an overview of the whole thing, and a feel for it, and I can [describe it], but I deliberately don't spend a lot of time talking to people about that because I believe they need a lot of time, or none at all, to make any sense out of it.

Int: (*Shows R the diagrammatic version of the Atkin Integral Learning model*) Do you understand what those arrows on the diagram mean?

R: Well, the process, as I understand it, means to that most people need direct experience on which to build an understanding from which to draw detail for which they can apply to new situations.

Int: So in terms of implementation, you are not putting it into practice because you don't have the detail. Do you use anything else?

R: I use Herrmann's to a certain extent. Actually it's the NLP model I use. I use the NLP model to diagnose, although I don't diagnose right left brain out of that, I diagnose audio, visual, kinaesthetic out of that, and then I make some attempts to diagnose in terms of this model. But I haven't ever done a great deal, but then I don't use this model to diagnose. What I have been trying to do is use this model to build up using the NLP background, to build up a learning profile that works for the kids.

Int: So you think about the model, you understand the whole picture of it, but haven't implemented much because you felt you didn't have the detail of the strategies. Are there any other reasons why you have not done much?

R: Laziness.

Int: Oh?

R: Poor organisation probably.

Int: Yes?

R: Yeah I kind of fly off on different things, you know, and I find that unless I can just sit down and play with something for a long period of time I tend not to get it to a point where I am satisfied enough to put it into practice.

Int: Would you put it into practice if you had been working on a staff with somebody that was doing it, as well and you, and could talk to somebody constantly? Would that have helped you to put something into practice?

R: They would probably would have done something (emphasis in interview).

Int: Because you had talked to them?

R: I would have still done what I would have done I suspect. I put it into practice, but in dribs and drabs. One of the greatest things I find difficult to do is to just sit and apply myself to one thing for more than about 5 minutes at a time and because there are so many things going on either in my head or whatever and so from that point of view I have difficulty with it. I mean I apply it myself daily in various things that I do, but I haven't done enough with the staff, and I guess I am at a point where I don't feel like I can do like Julia does, and that is stand up and kind of tell everybody else how it works. I don't have a handle on that. The sequence of that escapes me. I can show them the model, I can give them an overview and look at how wonderfully it works, and I have done all that. But to go to step to step and explain each of the processes, each of the applications and the various elements of the model, no I don't have enough detail.

Int: Was the workshop useful for you? Did you learn much that was new? Some teachers have been telling me that Julia is only telling them what they already knew, and now they can articulate what they are doing.

R: That's right. It's just like going to any seminar where you find yourself saying "Oh I knew that but I never thought of it like that before" and that was really what it was all about.

Int: Is that what happened to you at workshops?

R: No, more than that. I think I knew the model before I went. She didn't open my eyes to the model at all, what she did was and I think I knew that because of the stuff that I had done with NLP and Brendon O'Hara.

Int: As an acting principal, would you recommend the staff here to go to Atkin workshops?

R: I believe in what she and a whole lot of other bunch of people are doing. I mean whole brain learning and the understanding of processing, learning processing I mean that's the key to improving education in our schools. It's the critical key. If we could train all our teachers in what is currently known about how children learn, of which whole brain learning is a very large component, just like the NLP stuff is. If you can combine the Nancy Bell

stuff and you can combine the NLP stuff and you can combine the Atkin stuff, all that - you put all that together, you have got a powerful insight into what's going on a kid's mind and really that's what all our teachers need to do. Our biggest problem with the whole box and dice - they are too expensive. We cannot afford, I would have them here tomorrow doing my professional development program but I can't afford it! I said as much to Brendon yesterday. I said it is not just you, your fees are dear enough and I understand why you need to charge them but it's all the other fees, if I take 10 teachers off class there is another \$2000 dollars. I don't have it! I cannot do it! And the Department will not supply trained people to train us free! So we only do what we can do privately.

Int: So you are saying in other words that the Atkin model doesn't necessarily stand out above any of the others. Some teachers have been saying that the Atkin model it has provided then with a framework for understanding a lot of other workshop they go to, such as literacy or maths.

R: I can understand why they think that but my understanding of learning has always been that model. To me there is nothing.

Int: You knew it anyway?

R: Yes, to me there is nothing new in. What's the old saying, "I hear and I forget, see and I remember doing, I understand". We have known it for eons, it is nothing new in the world. Yeah but I mean that's an over simplification, but that's what they are all talking about. They are saying you cannot learn everything just by watching, by hearing or by doing. You need to integrate.

Int: So what you are telling me is that you knew Atkin model a long time ago.

R: Yeah, I guess. To me that was common sense.

Int: Do you think that most teachers have always been doing what Atkin describes, but haven't been able to articulate what they do?

R: Some are. No, most good teachers have a pretty good handle on why they are doing most things they do. There is not much that they do that they can't explain. They can't explain either a gut reason why I am doing it or an actual theoretical base to why they are doing it. I haven't met any good

teachers who can't do that. In fact what makes them good teachers is they won't use something they are not sure of. They have to be well sold.

Int: Do you think they know the theory behind what they are doing? How many teachers could explain why visualisation works? Why they use it?

R: They probably couldn't articulate too much in words, but they would be able to tell you in terms of processing and stuff why it works for people. They probably will be able to explain to that it's a visual world and that visualisation is a skill that seems to make kids successful and not successful at schools and therefore that's important and that's why I teach it. They might not be able to give you the neurological reasons why visualisation seems to work better in the brain, but they could tell you in an educational sense why it is important that kids visualise well. Which is really all they have to do. But there will be some teachers who will do visualisation and wouldn't have a clue.

Int: If you think back to the workshops, it is now a year, what stood out in your mind? That can be anything.

P Learning to juggle.

Int: As a personal experience that was important to you?

R: In the workshops themselves, probably not a lot. I mean there is no one experience that sort of goes boom.

Int: Did you think Julia she practiced what she preaches? Do you think she taught "whole brain"?

R: Yeah I think she appeared to, from my point of view, she was doing that. But because I was doing other things with my head I wasn't very conscious of all that, so it is hard to know whether... She obviously did teach in different ways. I often wondered why - when I got out of the workshop - whether some of the confusion I had was a result of that.

Int: Did you think she puts too much in the workshops?

R: I think that's a part of it. But also because she delivers, she does change modes, she delivers part of it in one mode and part of it in another, she doesn't necessarily deliver the same thing in three different ways. She sometimes delivers some things in this way, some things in that way. And

so what you find is if you happen to be the person that keys in here, the other two bits are vague. Now I don't know whether that's true or not, I'd like to look at your tapes from that perspective but I suspect that instead of ... See, if you are actually teaching to everybody in your grade, you are either doing two things, if you are doing it as a whole class activity, you are really teaching three ways and you go over it three times, so that you get everybody. Or you teach once to the bulk and then you go and teach it differently to the others. I have a suspicion that she in fact used different techniques along the spectrum, so that if she was teaching an activity, she started off on one and then moved onto another, and moved onto another. I don't know how much reteaching went on each level. And I suspect that that might explain some of our confusion. Where I kept getting lost in some of the tools, and I'd get half handle on it and then for some reason although I was there it was like "I hear you talking but you are not coming in".

Int: Her presentation style was a problem for you? You weren't quite sure why you were doing a lot of what you were doing, is that what you are saying?

R: Probably, what I am saying is - a lot of what I did - there are parts that are really clear and parts that are really not. There are a lot activities that she did that I don't think had a lot of relevance. I am not, but again this might be my preference of course, I am not really into play acting stuff, role playing stuff. I just think that's a waste of time. I would rather sit there and get to understand what the hell I am on about theoretically. I'll come up with a way of play acting it out afterwards. To do it there is a just a waste of time to me. What's that doing? All that's giving you is an idea for role play. I don't think it does anything for your actual learning.

Int: So you feel you weren't really stretched in those workshops because you weren't getting the bit that you needed?

R: I found myself wanting more meat and I didn't get enough of that.

Int: Would you like to talk to others about Atkin's work?

R: Probably, depends on the purpose of the thing. We're just to get there and have a chat, probably not but if we were to get there and actually get something more that I can use, yes.

Int: Well the reason why I ask is that some teachers have said that they would really like to know what other people are doing with Julia's model. Some have had no one to discuss implementation with.

R: The interesting thing I would like to know, is how much understanding the people using it have got. Because it's my experience with a couple of people that have tried it, is that they have used it in isolation, and they don't really understand the connections. And therefore it is useless, it's just like picking up the textbook, without knowing what the hell is in it. They are probably getting better results, but more by default than by design.

Int: Have you taught the model to anyone else other than the teachers at your school?

R: No.

Int: Is there anything else you can tell me about your understanding of Atkin's model or your use of it?

R: No, I think that's all.

Int: Thank you for talking with me.

Appendix 5**Interview samples from pre- and post-
interview and observation group**

The following is an a sample of the first interview (pre-workshop) with a teacher (PPOI 3) from the **pre- and post-interviews**.

Interviewer: Thank you for agreeing to this interview. First, I want to assure you that what you say will be kept in confidence. No names will be attached to the interviews when they are used in the study.

Int: Could you tell me please about your experience as a teacher?

J: I trained between '78 and '81. Began my career in a low socio-economic school. Had a number of disruptive students in that class for which I was ill equipped to manage. Went through several months of sink or swim and really deciding whether it was for me, and deciding whether I was coping and it was a turmoil start to my career.

Int: What age group were those children?

J: Grade 5. Then the second year I took four of those students on and worked collaboratively with another teacher in a special unit situation. So there were 2 teachers for 30 students, 4 of which were identified as having special needs and the others were considered within the normal range. So I did that for the next year and then the third year I took two of those four again and integrated them into a normal classroom situation. Then I taught for another year in an upper primary class. And then I went back to Uni and trained for 6 months in the area of special ed. And then I went back to that same school and worked as a staff resource person, where I worked with

small groups. And from there I identified that most of the kids that I was working with (despite the fact that they had learning disabilities) - their main problem and the thing that was really stopping them was their behaviour. So that's when I really got interested in the behaviour management stuff. So I did that for two years and then I went off to be acting senior teacher at another low socio-economic school and worked there for 18 months. I was part-time classroom teacher, part-time senior teacher. The following year (about '89) I then started working at a regional level on developing skills of other teachers in the area of behaviour management. And from '89-'92, I had various roles in the Supportive School Environment program. I began as a regional consultant then I was across district curriculum officer, and then I was state coordinator for 12 months. And from there I won the AST3 position here at Nixon St. and have gone back into a school situation. Although this year I am acting assistant principal.

Int: Could you tell me your reasons for attending the Atkin workshops?

J: My reasons for attending the workshops are to improve my teaching methodology and practice. I want to explore other ways in which I could present information to students so that they are able to learn more effectively. I have an interest in learning styles, and I understand that much of the workshop will be centred about teaching ... providing teaching programs to allow and cater for individual learning styles. And so I am hoping that I will get something practical that I can apply in the classroom situation. That's the first one. It's about my own classroom practice. The second one is about being able to run mini professional development sessions for other teachers, so that we can build up the educational program that we're offering to students here at the school.

Int: So it's two fold. Your own understanding and your own need/want to put things back into the school and the education system. So do you have many opportunities now to reflect on your own teaching?

J: No. With so much of it as an administration load, the time for reflection really is when I am actually facilitating the reflection of other people. And

... so in a senior capacity, whether it be as a grade level coordinator, or whether it be as a senior staff member, I'm encouraging people to reflect on their practice and very often that's the time that I reflect on my own practice, and indeed need to do this so that I can share that reflection with others, as a model.

Int: So when you're in this role you have a group process where people have to reflect on what they are doing in the classroom?

J: Yes

Int: In what form does that take? A series of questions? Do you have set questions to reflect on?

J: No. Generally I have a bit of a framework in my mind about looking for the things that have gone well, and perhaps alluding to the underlying reasons for why sessions or aspects of their program have gone particularly well. I always start with positives, then I ask them to reflect on something they would have liked to improve on, or something that they think they could have done better, or would need more information about in order to develop further, and we share that as a group. The ASTs - I encourage them to do that with the group that they are responsible for, and that's generally a group of three people. So there would be an AST1 and two people. So I've given them that bit of a model, and then I do the same thing with the group of AST1s.

Int: Is this common to all primary and early childhood teachers? Or is it something you have developed?

J: No I am following on from a program which was set up by the previous person. I'm not so sure whether those interviews were done individually, one to one. Whereas I'll do them with the group of four. So the five of us sit down. And so we're looking at programming in general, and the educational program in general, and drawing from individual specific experiences, either their own experiences or the experiences they observe from other people's programs. But that's slightly different to the work I do as a grade level coordinator for the grade 4s. And what I do with that ... I ask them to write them down each day, so that I know in a written way ...

I've got a couple of beginning teachers, and people who are new to the school and to the grade, and so I've asked them to keep a bit of documentation each day about the things which are going well, and how they are going to cater for students the following day. I understand it's probably a bit of a chore, and that some of them don't necessarily see the value in that. They like to do that more in their own minds. But my preference is to make it explicit. so that we've got something very concrete from which we can draw on and go back to, rather than having something implicitly go around in the mind. Unless I can make it concrete and say to others "this is what I'm doing with my program" or "this is what this person is doing with their program because ..." being ... (*interrupted by phone*). What I've been trying to decide is whether or not it's my own individual preference to have everything written down ... and I write everything down ... I'm not sure whether or not it's my preference to do it that way or whether it really is a reasonable expectation, to expect others who may not need to write everything down.

Int: I wonder how many teachers reflect on their practices.

J: We do it with students. Some people do it with students, and I think that if you believe in constructivism, and people constructing their meaning from previous experience, unless you've got something really concrete from which you can take it on from ... well perhaps it's more just words and not making real sense of them.

Int: So what are the ideas behind your own teaching practice? What philosophies do you have about teaching?

J: First and foremost my own is, or has been in the past, to make sure that I provide for social experiences. My goal has been about delivering a program that helps students to develop social skills. But that probably been because of the nature of schools, and the work that I have been actually doing. But with regard to learning, then my philosophy really is about encouraging students to take risks, to solve problems for themselves, explore alternatives for possibilities that they may not previously have had ... I don't like to present information that's necessarily got a yes/no answer

all the time like ... more diverse things. I use the 5 capabilities espoused in *Our Children the Future*, so I'm looking at developing the capabilities - the kinaesthetic, the rational, linguistic, creative, and also I'd like to develop those by investigating experiences through each of the key learning areas. So that there is a diverse range of experiences from which I'm aiming to develop those capabilities. With regard to classroom management ... I firmly base my classroom management on a collegial basis. So it's very democratic, based on rules rights and responsibilities, and consequences that follow appropriate behaviour and inappropriate behaviour. Certainly I'll set up, but I'll encourage the other students to join in and to have come up with their own notions of what consequences might be. And that takes me back to behaviour again, but it's the same for learning. If that's going to be that, then what'll happen if that happens, and those sorts of things. So constantly questioning and trying really to really provoke kids own ideas about answering questions, so that they're not being passive recipients to learning ... they're very active and involved in the learning process.

Int: That's something you feel strongly about?

J: Yes, well I suppose for me it's come from my experience with behaviour problems. That they are not passive recipients to learning. Unless I've been able to provide an active program, then I've lost them anyway, so it's been through experience that I've learned that if it works so well them ... for kids without behaviour problems, surely it's going to even improve their learning that much more. So that's really where that comes from. With regard to assessment and evaluation, generally I include the students in on that process. Sometimes it will be a collaborative effort, where I'll be asking the student for input into what they think should happen, or how they think a piece of work should be assessed. On the other hand, it might be that I outline to them what my intentions are for their learning program, so it might be that ... (*interruption*).

Int: We were talking about evaluation - collaborative effort with students. Sometimes you give them criteria for assessment first. Sometimes you collaborate afterwards.

- J: Yes that's exactly right. So all the time a teaching program is to try and involve them in actually thinking about their learning ... a) what they are going to learn, and b) in reflecting on what they have learned. So at the end of the day I generally ask for students to write down what their learnings have been. Or at the end of a difficult lesson I might say "What is it that we have been learning about?" because especially at lower primary ... perhaps some of the learning may have been implicit or as part of play or whatever, so they don't actually make the connections, and I'm not concerned about that during the experience, but I really like them to know explicitly the purposes behind the day. So at the beginning of a session I might say: "Today we are going to explore numbers or patterns," or something like that, and then we'll have a whole lot of experiences. I might tell them at the end: "Well OK we've been looking at numbers and patterns in numbers. Now I want you to go around, and go away and write down for me what it is that you've been learning about. What do you know about numbers and patterns after doing all of those activities." So I'm really trying to get them to think more deeply about the sorts of things ... very often lots of kids will have difficulties with that, and for some it's a matter of telling them and they will initially start to write down. But then once they get into the process ... we are not really encouraged to reflect and think about what we know. Either we know or we don't, not how you know certain things. So I really try and certainly over the last few years of my teaching, when I've been working with adults that's become even more clear, and so I believe that that would be a good adoption to carry over to a new class.
- Int: So are you looking forward to going into a new class, and putting all this into practice particularly after having been to Julia's workshop?
- J: That's exactly it. I'm really excited about the prospect of applying it. Some things I've already got that I'm making notes as I go about things that I actually want to do ... I can sense already a sort of frustration about the fact that I'm going to share them with somebody else. The worst part about this sort of role is that you don't actually have any of your own children to nurture in this capacity. I see naughty kids or intermittently good kids, but

I don't actually get to have a range of students that I relate to and build a relationship day by day. I'm more an extra. Whereas I'm really looking forward to at least in part having that opportunity to really develop relationships with kids and then see how far we can get them.

Int: You think that it's relationship that's the foundation of all teaching/learning? How have past workshops helped you in your classroom?

J: Varied. Generally speaking I'd get fairly excited about something new. A bit of a bull in a china shop type of change agent. And very often trying to do something I really haven't really got a grip on. I'll get a whole day of theory then go and try it.

Int: It's a great way to get a grip on anything isn't it - to try it?

J: That's right, that's exactly right. I've just done it so many times, and then when there isn't the support around ... I've noticed that it's very hard to maintain that momentum. Unless you've got people of a like mind around you, then I've found it hard to often maintain the interest in a new initiative.

Int: That's where reflection is so important isn't it. If you're a reflective person you can analyse what worked, what didn't work, and what's worth pursuing.

J: Yes that's right, and I get a lot of that reflection from actually talking to other people. So when those opportunities are minimised then I've often left things, especially if they've been a lot of theory days, like one-off workshops. They might be like a ... perhaps, dare I say it, a one week wonder. I'll go flat out for a while, and all of a sudden, boom, I'm not doing that any more, and I've forgotten about it and gone on to something else. The workshops that I have benefited from are those that have been spaced, that are on the same topic, or the same skill but in a different sort of forum, so that it might be, say, participating in cooperative learning workshops ... having an introduction and going away and trying some ideas, and exploring some of the theory issues, and then coming back and sharing what I've done with other people and then ... I work much better,

or I think my skill improves much more when I have opportunities to talk to others. "So I've tried this and that, and you've tried that and that, and OK, how does that sound?" So having that opportunity to sit around and discuss.

Int: So it hasn't got a lot to do with the workshop presenter? As long as the ideas are relevant to you, and what you want. It's what happens afterwards which makes you either put it into place or abandon it?

J: That's right. A good example was recently when a team of us went the NLP workshops with Michael Grinder in Launceston, and I didn't see those people for a fortnight. We had a lovely day ... It was very presenter oriented. That wasn't necessarily a criticism. It was the nature of the day. I went away and I'd done nothing, really nothing. It was just a good day. I'd enjoyed it but it hadn't had an impact on me, and it wasn't until we'd come back in a fortnight, and in my sleep or in the back of my mind had been this work and how I could see it fitting in different places. It wasn't till we came back fortnight later that I actually starting thinking: "Ah yes, this is where I want to use it." And through my talk and my listening to other people, actually then did a whole lot more with it. I really am a talker. I learn through talking to or listening, or talking with others.

Int: Sparking ideas and getting excited together makes a great difference. Is there anything else you want to add about yourself, your philosophy, you as a teacher? You've covered a lot.

J: I think I've just about ... I've mentioned relationships. I've mentioned classroom management, learning challenges, experiences, the capabilities. I think I've just about finished

Int: Thank you for talking with me.

The following interview is the second of three interviews with a teacher (PPOI 3) from the pre- and post-interview and observation group.

Interviewer: Thank you for agreeing to speak with me again. First, I would like to say again, that everything you say will be in confidence, and second, that I am not here to check on your use of Atkin's model. I am equally interested in knowing why some people are using it and some are not. If people are using aspects of it, I would like to know which aspects, and if they see any value in it for them and their students.

Int: I am interested to find out how you feel about Julia's model since the last workshop. Have you been able to use any of it?

J: Yes I have. I've tried hard to incorporate aspects of the model into the limited teaching I am doing, but I feel really frustrated the level that I'm at now. I'm conscious of where I should be going or some of the possibilities of what I could be doing, but not implementing it at a satisfactory level. I'm not sure whether or not it's due to the unfamiliar age group I'm working with, or whether it's got something to do with my lack of understanding or acquisition of knowing what I should be doing anyway. And I suspect it's probably a mixture of the two of them. I don't really want to blame the kids by saying it's because I haven't worked with this age group before that I'm not teaching in a really interesting way. I'm really frustrated. I need to regroup and get back with people and talk about some of the things that they're doing so that I can re-see the vision.

Int: At the moment you're picking up the odd strategy here and there where you can?

J: Yes. I'll continue to do that. to incorporate strategies from the model in everything I try and do, even if it's in the spelling groups that I have. I'll look at getting kids to look at different ways of trying to remember the word, whether it be through pictures of the word, or through walking out the word - trying to get it into their muscle memory. I continually address the strategies and try and incorporate those, but my frustration is: Am I doing that OK? Is this where it's supposed to be? When will know I've got it right? Will I know I've got it right? Or am I on this never ending cycle of

trial and error, trial and error, and I'm really uncertain about the effectiveness of what I'm actually doing.

Int: Does this mean you're using strategies without really putting them into the big picture?

J: Yes, perhaps so. I understand the model.

Int: Do you? Tell me about that.

J: I have to have a look at the picture. I understand where it's going. I understand that she is incorporating a whole lot of different strategies, not so much strategies ... a whole lot of different concepts, and aspects about the way in which people learn, in order to facilitate and enhance learning. I generally understand that in a conceptual sort of way. And then I understand what she's doing in with regard to visualisation. I understand the bits, but I haven't made the connection between the bits and what I see as the concept of where I am going to. I haven't made that link. I've got all the bits on this side, and I've got the big picture on this side, (*gesturing*) but they don't link together yet.

Int: You've got the big picture of catering for a whole range of thinkers, learners, doers, and you know that is conceptually what the model's about, and you've got a heap of strategies.

J: Yes. And they are not integrated at the moment.

Int: Why do you think they are not integrated?

J: I suspect that the link is the Experiential Model. I don't know but I suspect that. It seemed to fit well with how I thought people participated better in workshops when I used experiential learning, to when I didn't. But I didn't actually knowingly use that as a way of enhancing learning. It was more: "This is a good process. It works really well". I know it actively engages them but I wasn't so explicit in my understanding of why it was so effective.

Int: Was that because you intuitively knew that the only way to get any interest was to hook into their lives, and to their own experience?

J: I'm learning more and more to rely more heavily on my intuition. I know I'm a really intuitive person, and I guess I've devalued that over lots of

parts of my career. I've done things without explicitly knowing why, and for some reason it may be the most effective thing. Well now I'm relying on that more and more, and I'm getting better and better at it too. I make less and less mistakes in my intuitive mode because I am more confident in knowing that, intuitively, I do know some things and then ... though it's good to know then how experiential learning links back to something that's known, like Julia's model. I'll still get satisfaction out of something I've done intuitively, knowing that there is good reason behind why it might be so. The model gave me a framework for understanding what was going on in my head. Now if someone says that sounds a bit harebrained. Before I would have shut up and not said anything more and thought "what a stupid thing to have said." Now I'll say "what makes you think it's such a harebrained idea? What is it about my idea that doesn't fit with what you already know?" Now that may be true. It might not be a very sensible idea. But I'm not going to be sitting back and letting other people's thought processes take over when that might not be the very best for the situation. Now I know it's an alternative way of thinking that maybe others haven't considered.

Int: Julia talks a lot about appropriate mental process. Have you reached an understanding of that yet?

J: No. I'd have to say no, but I think it's got something to do with the fact that I'm missing a chunk. Perhaps that's the link that I'm missing.

Int: Do know from the model, or being at the workshops what it is that successful learners are doing?

J: Don't know that I necessarily know that just from the workshops, but I think that they do that when they create their own meaning, from what it is that they are doing. Perhaps that's something that I've picked up from other places, but I'm better able to articulate that more, by going to Julia's workshops. But it's something I believe in. Unless they're interested and involved in learning - unless there's some purpose behind what they are doing, they can't create the meaning anyway, so they're not learning anything. One good example that happened last week was spelling groups.

I do some support lessons for grade 2 and the teacher is really skilled at being able to teach the way the language is made up. Why the words are spelt the way they are. The rules I suppose behind the way we write, but it doesn't sink in. These kids are not learning. I'm finding what she's got to say really interesting ... but I don't believe that they are learning meaningfully, because when I took them for spelling, they'll say things like "does the 'i' come before the 'c'?" They've got this half thing, not the total picture, or haven't really got the need yet to be able to spell correctly. So while I thought she was good, she was only drilling and the children weren't learning meaningfully.

And another example: We've had some trouble with playground behaviour, particularly with two boys. And we've just about turned their behaviour around by i) showing them alternative games to play, ii) telling them aggression isn't one of them and they can't be like that but to reinforce that and to add that bit more to it ... "when you are playing nicely and seen to be playing nicely" (and we've been through what playing nicely means) it's about playing on the equipment and about sharing, and about kicking the football with other people rather than grabbing it and running off on all those sorts of things. And I've been out there and gone through that with them like what does it mean for me to kick the football to you. How do you feel now? this is really good fun. Now how do you feel when I grab the ball and run off and won't talk to you any more and play, and they get really aggressive. So we've gone right through it. I've added to that, to seal the model that goes with the behaviour a positive reinforcement. So I'm not entirely not sure which one's working but if they are playing nicely and they're caught playing nicely they get stickers, and when they've got 10 stickers I get them a packet of chips at the end. And even that I've tried to make experiential. When these drawings over here are those. I draw them when the children are here with me. They've got a visual picture of what playing nicely means. So for Shaun, to be a successful learner, we had to enact the appropriate behaviour, visually and

kinaesthetically. He wouldn't have learned appropriate social behaviour otherwise.

Int: If you look back to the workshop, what stands out in your mind?

J: Guided imagery. I actually have not been very good at participating in guided imagery, and that time was about the first time it had worked for me.

Int: Why do you normally have problems with this strategy?

J: The guided imageries I've participated in before seem to me to be someone else's picture that they were trying to get me to see.

Int: So they didn't know how to do it properly then.

J: Probably. They'd say things ... I can really remember one about creating a ship and something they'd said alluded to the fact that it was a certain type of ship, but my ship wasn't that type at all. Another was a garden and I realised that they weren't talking about the same garden as I was. I lost the plot on that one. But yes, the guided imagery. And also the drawing ... working with the left and right hand together and when we were working together and guiding each other's hand. And then we had a practice with copying those pictures upside down. I really got a lot out of that for myself.

Int: Could you explain what that was that you got out of it?

J: The drawings were much better. Concentrating on drawing spaces rather than lines. The image was closer to the one I was copying than if I'd tried to draw it. I didn't see the spaces before, so now I see both and my drawings are better. I wouldn't be a real life drawer but I could make a close approximation copying someone else's drawing.

Int: They are the two most important things that stood out in your mind?

How would you rate Julia? Do you think she practices what she preaches? She's preaching a model of *Integral Learning*. Do you think she's teaching that way?

J: Yes. She's really inspiring. I liked her teaching style the way she presented herself in her persona, not just in her attire. And the way... little things like her capacity to be able to learn names and remember them. It's just

incredible and yet that's just a small way in which she demonstrates what she's actually on about. She meets a whole range of learners' needs. When you come to the folder, it's really systematic it's really purposeful in the way in which it's been organised all the way through she's addressing... I'm really impressed with her.

Int: Other teachers are saying they are not ready to put anything into practice because I feel I've got a whole heap of theory. Do you feel that?

J: No. In fact I'm a bit the contrary. For me its the other way around. I'm missing a bit of theory that I think is going to give me the link. I'm missing a bit of the theory that I need to finish something off. I've got a hole somewhere and its like having a key and unlocking the door. You've got to know when you've got it, but I don't know what it is that I'm actually searching for.

Int: Have you talked with anyone else about using Julia's model at this stage?

J: I'm starting to talk to other people in this school about some of the notions behind her model, an awareness raiser about the fact that we've got to cater for a whole range of different learning styles in a number of different ways, and I wonder how well we are doing that now. So I'm really just trying to start the cogs rolling a bit and a couple of times I've seen someone doing something. In one classroom here I've got a teacher who's really interested in the Brendon O'Hara stuff and has never been to any of his sessions, just picked up the literature and adopted some of the things. So she's got an inkling that there's more strategies, more ways that we can access kids learning, so I've introduced to her some of the association maps and mind maps so that she can practice before her belief changes. I said to her "Try this, it may be along the same lines as he is". Whereas with others, I'm just doing the awareness raising questioning; are we really meeting all these kids needs? And when we've got these behaviour problems in class, is it entirely just the child's responsibility that they're misbehaving or has it got something to do with the way we are teaching? So I'm trying to drop more pondering questions.

Int: So if a parent or colleague asked you to explain Atkin *Integral Learning* model, could you do that?

J: No. I'd be able to explain that the learning needs to be integrated and it needs to address the learning styles of the child. Yes I could explain I think.

Int: Is there anything else about Atkin's model and your use of it?

J: My frustration might just be that I don't learn very well on my own. I like to talk about it with other people and despite the fact that I've got J and D here, coupled with the time factor and probably our different approach to the way we like to learn things anyway has impeded that natural ... "what are you doing here?" and "how does it fit with that?" and initiating that sort of discussion. Where I might be more fulfilled in a different sort of setting. So the frustration might be my way of learning more so than anything else. But I'm really frustrated. I need to regroup and get back with people and talk about some of the things that they're doing so that I can re-see the vision.

Int: Maybe the next workshop will clarify a few things for you. Thanks for talking with me.

The following interview is the third of three interviews with a teacher (PPOI 3) from the **pre- and post-interview and observation group**. This interview was conducted after this participant had completed the series of workshops.

Interviewer: Thank you for agreeing to speak with me again. Like the other interviews, everything you say will be in confidence. Remember, I am equally interested in use and non-use of Atkin's model and reasons for both positions.

Int: How did you feel about Atkin's model, at the end of the 6 days. There is no more to come, do you think that you understand more?

J: I found, that was great. I just felt as if it had come together and it was interesting feeling wise. I felt really sort of sad and disappointed that it wasn't going to keep going on.

Int: It's OK that it's finished?

J: Yes, as far as that goes. Although with the sort of people suggesting networking - I think there's a possibility of that. The learning won't change in itself for what we accomplished in the six days. And to have felt like we had accomplished something - and that after the couple of days, and the day at Penguin in the middle clarified it a lot. The day we had the Penguin, talking to the others, made a big difference to my understanding, because I was able to have a lot of my questions answered.

Int: Yes?

J: All that made things a lot clearer for me and being fairly close to this last two days, I feel things tied together like it drew together for me. I could have actually done with another day.

Int: Did that good feeling change when you came back to the reality of the school? Or do you still feel good about it all?

J: No I got really warm feelings and it has been easier for some reason ever since. Look I don't know if I have changed anything, in fact I can't think that I had actually have. Except that things seemed to be working better for me. I don't know whether or not I am not trying as hard as I was before. Perhaps that was why I was sort of stumbling through things I was trying to make it harder than what it was. I suspect that is what it might have been. Or whether or not something did click and I am much more aware

about trying to use a range of questions and getting kids to sort of think more laterally about the way they process and do things.

Int: Very consciously?

J: I am much more conscious about giving them wait time and legitimising that. Like yesterday when I was in a class for the afternoon - as you know - putting the model together, it really came together for me. That was the thing that I really struggled with over last few months, but I felt great yesterday. It was the same sort of feeling - that all of a sudden I had been able to actually transpose it all into a grade 1 class, which up until now I hadn't felt that I had done very successfully.

Int: And yet you didn't structure anything, it just happened more. Is that what you're saying? That you feel more integrated yourself?

J: Yes.

Int: Isn't that interesting. When you feel you have integrated it, you feel personally more integrated and it carried across into the classroom?

J: Well yes. And it hummed like there was just a different feel. I think because kids are so intuitive they pick up on the vibes that I perhaps I was sending out. And now it happened, and there was a pattern about what I'm going to do with them.

Int: I am sure that's true. Children certainly seem to understand things intuitively.

J: I am sure that's what happened today. Look, even though I was planned for library lesson today and where I wanted to go, I actually didn't have my list of questions. When I plan lessons, I plan the questions I'm going to ask - not the beginning, middle or end of the lesson. I go to the folder (*Inservice Course Notes*) and plan questions from the four quadrants. It's the questions that make the lesson flow. I always, I try and structure my questions till I get used to them tripping off my tongue. I found that that's the way for me to focus, when I am in private, about the sorts of questions I might ask, even about a story. And then I am noticing that at other times I am kicking more into the language of remembering the sorts of questions that perhaps trip me around the four quadrants a bit more. The questions

should help the children see the pictures in their minds. See normally I would have shown them the pictures. In today's lesson I wanted them to picture in their own minds, because they actually don't like doing that. They get really disruptive and agitated by not watching the pictures as I read the story.

Int: But you feel that you have got to help them to see their own pictures in their heads?

J: Now what I do, is to start off with books with more text and less pictures. I had short picture stories to get them through to begin with, now I've started off with a lot more text and I don't show them the first couple of pages. Instead I ask them questions to begin with.

Int: So they have got to start picturing?

J: Yes, so they get the idea, and then I show them the picture and go through the story now. Next week when I do it, it'll be three or four pages that I keep from them, before I show, and then I'll go back and say: 'This is how this illustrator saw it. Is it different from your picture?' That sort of thing - to try and build that up and carry that over. If you only give kids picture stories then they are going to always rely on the picture cues to get the meaning from

Int: What will you be doing next year? Will you have a class of your own?

J: Yes, I'll be on a class. Probably a grade 4.

Int: Do you think you'll be different as a teacher next year? As a result of having those six days?

J: Undoubtedly. One of the things I constantly think of is that - I found strategies like getting people to internalise learning very useful. When you produce something in a non-verbal way you have to fully understand it. The knowledge has to be internalised or integrated before you can reproduce it. The reproduction can be suited to individual learning styles which, from my perspective deepens and enriches the learning.

Int: So the Atkin model has had an influence on your teaching or your thoughts about teaching?

- J: Yes, but more so about the way in which I relate to people, the sorts of things that I will do. I suppose it is about teaching but it's that big part about relationships.
- Int: Did you pick that up from Julia - that relationships is a big aspect of her model?
- J: Oh yeah, definitely. What sort of really clicked after the workshop is that the relationship] side has always been really important to me - so I have made that connection there 'coz that fits with what I know about a good classroom. Unless there are good relationships then it doesn't really matter what model of teaching or learning you are using, it's not going to make too much difference. But it's about using some of her strategies if you like, not only in the classroom but when I am talking to all kids or all people, it's trying to integrate that into the whole world, not just about teaching and learning.
- Int: Do you think that would explain why you personally might be becoming more integrated and kids are picking it up intuitively?
- J: Yes. Because I feel more comfortable just in my normal conversations about the way in which perhaps I relate with people and especially ... as a senior staff person getting people to actually like working differently, and using many of the strategies to be able to help their growth and development.
- Int: Is this because you now understand, from Julia's model, why people are the way they are, and so you have got the tools, in terms of questions and understanding?
- J: When she actually gave us the visual - the image she gave us about the garden, that's when it clicked.
- Int: Tell me how that clicked so much.
- J: Well I can't really tell you that specifically other than it's about having a garden and a plant and the tools. Like it is - I can't even break it down. It's in my head - that's the integration.
- Int: The garden metaphor is the key to your integration?

- J: I have got, literally, a picture or an image about what it is, and so what I am doing now is more purposeful because it's part of the garden.
- Int: And you have got a lot of useful tools, and the blue print - a plan for the garden?
- J: Yes and I bought in some strategies that I had from before, because it fits into the whole notion of what I want my garden to be like. It's just that once I clicked with the garden imagery, and really what the garden looked like as it related to people, I felt it had all come together. Julia's model fits into it. I suppose what I struggled with for a long time, was trying to make Julia's model discrete. Julia has got a model, but it wasn't discrete from other things that I knew, but I was trying to make it discrete.
- Int: I understand. D. made an interesting comment this morning which ties in with what you are saying. She said that since doing the Atkin model it has made all the other workshops make sense.
- J: Yes, that's right. The garden is the entire pedagogy. Julia's model is just part of it you see. The garden makes her workshops and others make sense.
- Int: So in other words, all those other workshops are the tools for the garden?
- J: I'm not sure. No one gave me the garden. Though I am not sure that, had someone given me the idea or the notion about blueprints and gardens, tools and strategies, whether or not it necessarily means that Julia's stands alone and right apart from any other model, or whether that - I am not sure what I am trying to say here. I think it is the image and the way she was able to build up the image that was the most powerful learning, in that it allowed me then to bring in other learnings, apart from the concepts, the strategies and the techniques and her model about integration, allowed me to bring in others. If you take hers as being the crux of a whole lot of other theories about learning and teaching, then you can make connections in a sort of a web about how they all join together.
- Int: Do you think you could explain the Atkin *Integral Learning* model to a parent or colleague?

J: Yes is highlights three component of effective teaching that need to be in place for learning to occur:

1. Relationships
2. Psychological conditions
3. Appropriate mental processes

Int: (Showing J. the diagrammatic version of the Atkin *Integral Learning* model)
I actually meant this model.

J: I didn't get that. Good heavens, I've been under an illusion. I thought that was Kolb's Model. Well what are the three things then?

Int: (*Explains the relationship between the two ideas. J wanted to know where she had missed the distinction*)

Int: Have you had any support from your principal or from your two colleagues who went to the workshops?

J: I talked more to D. than J., though I stopped talking to D. because she didn't seem to understand what I was trying to grapple with. Her responses were such things as: "What's the issue?" And I only talked to J. in a supervisory way because she was only doing the strategies and she couldn't talk at a conceptual level. I had to have a conceptual understanding, particularly because I wasn't on a class every day. She only wanted to talk about the strategies. The principal wasn't interested. It wasn't a school priority. There were so many competing priorities - so many issues to contend with.

Int: Next year, when you are on a class, you'll be structured in a different way? You'll start from the beginning, doing things differently?

J: I think now, just in preliminary thinking, I'll start much more intensively and purposely on structuring things to build the relationships. I'll spend time in the first few weeks in setting up the cooperative learning structure.

Int: You have always been a cooperative learning person, haven't you?

J: Yes but I have not taught the social skills as a deliberate beginning focus in the way that I think that I might do that now.

Int: Tell me how you would do that now, having been to Julia's workshops.

J: I'll teach them things like assertiveness, and I haven't done that before. And I think I'll teach them about listening. Before I have set up structures by saying "well, okay in this group, this is the task, and this is the content". If I said to a kid "your role is the listener", I am not sure that I did it as deliberately as outlining what a listener does, or what a coach does. And I think that's where that I can right from the very start. For example, for a coaching role I would get the kids to start thinking about their language, and the way in which they encourage others to think about them, like: "what makes you say that", or "what did you see in that"? In other words by giving them the clues to be able to do that more purposefully.

Int: Are you still doing the concept maps?

J: Yes and I have got a good example about that as well. As you know I found it easier to apply the strategies to adults. And I have continued to do that. We set up this big coaching network and I am responsible for Grade 4 teachers. Now they have set a goal in what they want to achieve in term 3. For example one of them wants to look at class meeting and relationships in classrooms. So we investigated that via a concept map. And about relationships and classes issue, I was trying to pull together all the things that we knew about those. It was fairly crude because the purpose was about getting what we knew down about relationships, and for the purposes of facilitating changes in her. But I know that within me the concept map was a structure that I had then been able to draw on - that I mightn't have done before.

Int: So is there anything else you need to tell me about your beliefs, feelings, whatsoever about Julia and her model?

J: Only that I had always unknowingly used the experiential model, actually. It seemed to fit well with how I thought people participated better in workshops when I used that to when I didn't. But I didn't actually knowingly use that as a way of enhancing learning. It was more: 'this is a good process. It works really well.' I know it actively engages them but I wasn't so explicit in my understanding of why it was so effective. Julia's model makes explicit what teachers know intuitively ... Her model builds

...on what good teachers do anyway and gives a rhyme and reason for what we do. She just gives us extra strategies to enhance what we do.

Int: That sounds like a very useful learning from the workshop.

J: Yes it was. (*Interrupted by phone and knock on door*).

Int: Thank you for talking with me. Good luck next year.

Journal

REFLECTIONS:

Teaching and Learning Effectively Workshop

March 30, April 1& 2

- I drove to Wynyard with enthusiasm having read a paper written by Julia and having attended a one day workshop she facilitated a couple of years ago. I certainly wasn't disappointed with the day in fact my desire to go back to school and try out a couple of ideas was very strong.
- The day gave a really comprehensive framework which I could use as the more practical strategies were introduced.
- Having the day break between the two sessions really helped in allowing me time to process some the key learnings I extrapolated from the day.
- As we revisited the *Integral Learning* model in the second sessions, I realised that there was an explanation for many of the things I had done and seen others do intuitively. That is, some children haven't responded to say, "traditional" methods and teaching strategies and I've really needed to explore alternatives in my endeavour to "switch kids on". I now have a way of explaining some of these strategies and in fact can now use them in a more explicit, planned and purposeful way. For example, because "picturing things in my mind" and worked for me when I'm learning things I encouraged children to do that. For some this strategy really helped but for others it seemed a waste of time but I had no way of explaining why.

- Throughout the two days we were constantly reminded about us having preferences of thinking and processing information but we're not limited to these preferences. I was really encouraged by this belief and just knowing that can influence the way in which I, and teachers I talk with, can organise their learning experiences in a more multi-modal fashion. I think sometimes people latch on to a label and then 'box' people accordingly. For example I frequently heard people say initially "I can't do that I'm left-brained or I can't synthesise information". I noted each time some-one said something like that Julia turned it around and re-stated what had been said.
- I had used the 'Experiential Learning Cycle' extensively in my work with adults and had taught this process to others. I can see very clearly how the two models are related and that Julia's model really facilitates a deeper level of thinking. The 'Experiential Learning Cycle' focuses on providing an experience and then working through some systemic questions (devised by the facilitator for each of the learnings they want to make explicit) to draw out the learning and then make some generalizations and apply the learning to another situation.
- I really appreciated the thoughtful organisation that Julia had gone to in preparing the folder and the handouts she added.
- I found Julia's style very relaxed yet stimulating. I marvelled at her ability to respond to questions, to keep the group focused and especially how she linked experiences back to the model she had previously introduced.
- All-in-all I was thoroughly immersed in a process that has sent my mind reeling with possibilities and applications. In true fashion of things I have a passion for or am really enthusiastic about - will jump-in, feet first as I try out some of my learning.

This information has been recorded since March 30, 1993 and are reflections, thoughts and concerns experienced as I learned more about The Integrated Learning Model [sic] and have worked at implementing my learnings. It has been written to give Jenny Gardner, Doctorate Student [sic], an insight into how understanding Julia Atkin's Integrated Learning Model [sic] has influenced my teaching practice.

March 31, 1993

- Last night, in an attempt to do something with my learning from Julia's workshop, I wrote a guided recall about visiting the tip. I wanted to trial this idea with a grade 1 group as a way of introducing the story *Grandma McCarvey*. I can now say I know how not to do a guided recall, especially with young children. I asked a number of rhetorical questions as a way of guiding children's memory but young children couldn't answer these in their head and wanted to share their answers at the end of each question.

April 7, 1993

- I've begun planning my next course on Assertive Classroom Management and have incorporated concept maps into the first session. Given a lot of words about Classroom Management I want the group to identify the links and develop their concept map. I've developed some possible session topics as a result of completing my own concept map and have used the words I came up with as the list for the group to arrange into a concept map. I'll get the group to keep these and then re-do the exercise at the end of the course to identify participant's learnings.

April 18, 1993

- Today I started planning for my next C.A.T.S. workshop on classroom management and decided to use a concept map. Firstly I used it to plan the sorts of things I wanted to address in the course and secondly I've planned to use it as the introductory exercise and concluding exercise to the course for the participants. I think it will show immediately the links and understandings each participant will bring to the sessions and also how much this changes throughout the workshops. I used the same approach earlier with another group and their expressed interest and enthusiasm has spurred me on to refine my skills in drawing up maps.

April 20, 1993

- Prior to getting children to retell a story, I started getting the children to close their eyes and make pictures as I made some prompting and reminding statements. The children's stories were written and drawn with much more detail than just when I read the story and then asked them to retell it, as I had done on previous afternoons.

May 15, 1993

- I am finding it really difficult to apply my knowledge in practical ways while I'm taking library lessons with students. At staff meetings and professional development days I'm finding that I am able to use and teach via mind-maps and visualisation which are the current aspects I'm focussing on. I have certainly discovered that asking rhetorical questions to five year olds is absolutely a waste of time.

June 18, 1993

- I've started a twelve week, one and half hour time slot with a grade one class and I'm deliberately planning an experientially based program. The first session is about "Special Relationships". I'll start by getting the students to focus on an old person they know and get them, after a visualisation exercise, to draw, paint and crayon their special person. I'll read them a story and then get them to establish similarities and differences between the story characters and their old person.

June 22, 1993

- What a great success - it actually worked with the group. All the children appeared interested and engrossed with working on the activities asked of them. I was particularly interested in noting that a couple of students, who normally are easily distracted, concentrated for a longer period. Next week it would be better not to plan such so much as the students are much slower at completing their tasks than I had envisaged. I'll continue to incorporate cooperative work and discussion in a more deliberate way. I hadn't planned a cooperative activity

but when the group was working so well I tried one off the top of my head and the students reacted positively. The group very naturally worked cooperatively and surprisingly enough each member to the group participated appropriately.

June 25, 1993

- I've started planning for the workshop at the Principals conference and I'm really confident that the plan will successfully engage the participants. We're going to begin with a Constructed Controversy - to open the participants' minds to the alternatives for Peer Coaching and then through cooperative jigsaw, identify facets and plans for introducing Peer Coaching in their school. We used a concept map to try and clarify the facets we thought to be important. I found this really useful and the more I'm doing the more sense they make.

July 13, 1993

- I planned a technology session for 1 Ha today and although it was practical and the children were interested I'm still not really happy or am confident that it is going OK. I read once about the Implementation Dip that occurs when some change is being trialed and implemented and that teachers' performance actually drops off before you can see the benefits of the change. I hope this is happening to me.

July 14, 1993

- Plan two for the principal's conference now underway, we lost the first plan and on sleeping on it for a couple of weeks we've made a change. We'll begin by personally engaging them in reflecting a change that they have been involved in and from there build on and out to develop a bigger picture of what peer coaching is all about.

July 19, 1993

- I feel really isolated in trying to change this aspect of my practice. I keep asking for ideas and feedback (asking specific questions about some of the ideas and how others are implementing the change) I don't feel like I'm getting

anywhere. I can't decide if it's what I'm planning and teaching that is the problem or whether it's because of the unfamiliar age-group.

July 30, 1993

- Feedback from the conference indicated that the participants thought the session to be of value and one person said that in the course of two hours I managed to present a useful program that will allow each person to go away and reflect more deeply on.

August 19, 1993

- I've been sharing my understandings asking questions, seeking clarification from others about Julia's work and finally I'm beginning to feel as if I've got a grip on the interrelationships of her model. Up until now her work in isolated segments has had a big impact on my intellectualisation of learning theory, but now I'm beginning to make more sense of the inter-relatedness.

September 5, 1993

- I presented the School Plan and the session on program reviews using a concept map and by formulating questions which I believed got people to access all parts of their brains. The session was a terrific success and several people commented on how meaningful such a boring topic actually was. "By George - I think I've got it"

September 19, 1993

- I've started working with a beginning teachers, one of whom could be considered failing. I asked her to liken herself to a boat. She said I think I am like a row boat or a junket (sic), caught in high seas. Sort of just afloat, but not able to have much control over where I am going. On another occasion I asked the other teacher and she said "I think I am an ocean liner". The two metaphors couldn't have been more appropriately explained. With the failing teacher, I have used her analogy as a starting point. I've asked her to go away and think

about what sort of craft she would like to picture herself as." I'll use this as the basis for the supervision task of working with her to improve her practice.

October 22, 1993

- I am currently writing some end of year reviews and have spent some time in people's classes, getting a feel of how each manages their role. Looking at three older experienced teachers I see that they teach, sort of intuitively. They know the components of good practice and implement a learning program that stimulates and really switches children on. When I ask them why they do some of the things they are doing, they're not always able to articulate an educational theory. Eg., "Why do you get the children to write words in the air or get them to rehearse a little rhyme about the ways letter is formed ("b= bat before the ball"). "I know that not all children learn by the same method. Some seem to need other tools or aids to help them".

I now think that Julia's model helps make explicit what good teachers do intuitively. By making the components of good practice explicit then we can make teaching more deliberate. This of course ties with the department's commitment to constructivist theory and teachers playing a significant intervening role in their work. Julia's model and the department's expectations are compatible. In fact I think Julia's model gives a practical framework for how school staffs can approach the Department guidelines.

December 15, 1993

- Today I invited all the next years kinder students' parents in for an orientation day, rather than simply talk through the value of kindergarten and what actually happens throughout the year, I told a story, using overhead illustrations. I am really excited about the success. One parent came to me later and said that they had been in two minds about coming along and that they were glad that they had. They thought Kinder was a year "wasted" where children simply played and that learning and teaching weren't important. In fact she said she had been in two minds about whether to bother with kinder and continue sending the

child to the creche. She said she was no longer in two minds and she couldn't wait for her child to begin their school life.

December, 1993

- Julia's work has led me to really reflect on good teaching and in particular the strategies and reasons why I chose to teach the way I do. Having others around who can discuss things with is of real value for two reasons - it helps me to clarify my thinking and it keeps me interested in discovering more. I am now really committed to trying to tie together the profiles, teaching models, social structures, learning styles and promoting higher order thinking. I am beginning to visualise an inter-relatedness that will help teachers to get a grip on all the new terminology they are expected to come to terms with. I think the most valuable practical strategy I've really refined from Julia's work is the concept map. I have used this tool to picture so many things this year.

Journal: Activities Involving Left + Right Brain
Learning Prep Level

<u>Activity.</u>	<u>Engagement of brain quadrants.</u>
1. Discussion about class rules, procedures, cooperation in the classroom. eg: We put our hand up to ask a question - We return our equipment to the trolley when our work is finished.	lower left.
2. Silent reading - daily after lunch. Allows for interaction with print, illustrations. Recognition - of sight words, words including basic sounds. (For beginning readers). Some chn able to read.	- Lower left - word patterns & sounds - Upper right - involvement with a story, imagery. - Lower right. Chn interact with a story, become part of the story
3. Movement based on class story: Little Red Riding Hood.	- lower right.
4. Handwriting - daily practice of writing patterns and letter formation eg l l l l l, © b b l l	- Lower left - patterning, organized structure & content.
5. Spelling / Reading - daily. Sight word recognition - cards, games. Two new words each week, looking at patterns, sounds to help identify.	- Lower left - Upper left.

- Big book reading -> daily.
- Whole class involved in reading. Discussion of right words, punctuation marks, sounds in words, illustrations.
- Upper/lower right
- story sequencing, content, providing alternative endings.
- basic character analysis.
- Example of book title.
- Clay Bear
- Billy the Balloon.
- The Train Ride.

- Finger play, acting rhymes.
- eg: Incey Wincey Spider.
- Miss Polly
- Ten Little Monkeys.

- Upper left -> liked to introduce numbers, counting, writing, numeral to quantity.

- Upper left
- Lower left
- Upper right eg: construction game eg legs, rostrum blocks, threading, eg cotton reels, buttons, whoppers.

- Dot to dot activities.
- Upper + lower left.

- Spatial work - basic shapes eg: square, circle, rectangle, triangle.
- Attributes - sides, corners, thick/thin, large/small, colour.

- Cooperative learning.

Big Book - shared story
Brown Bear, Brown Bear, What Do You See?

Moving Circles activity. 2 circles
chv face each other, $\frac{1}{2}$ min
each to name all the colours
they know. Move onto another
partner. Repeat.

Reporting: some unusual
colours chv mentioned.

- Creative Writing: chv draw a
picture of their choice, or
based on a story. Write
their 'story' to go with the
picture. Child reads what
has been written, & scribes
underneath to provide correct
spelling model.

- Painting: 'Brushstrokes'.
Chv use various sized
paint brushes & paint to
reproduce unusual brush
strokes on display chart.
Use ~~extra~~ different strokes
to create a picture after
experimentation.

- Story Sequencing:
look at large pictures in
a row. Colour the small picture
that shows what is more

- lower right. -
interpersonal
discussion,
reporting,
sharing.

lower right.

lower left.

Upper right.

lower right.

likely to happen next.

Lower left.
Upper left.
Upper right.

- Tangrams. Match 7 pieces to a given pattern / picture.

Upper left
Upper right.

- Maths. Money.
Coins stamped onto a sheet
Colour the 5c coins red.
" " 10c " blue.
" " 20c " green.
" " 50c " yellow.

Lower right.

Upper left.

How many dollar coins are there? —

Sheet used ^{for} follow-up.
after discussion about coins
& their attributes, chn observe
& feel the coins in various
games.

hearing through whole gp
discussion, attribute game,
sheet work: eg. matching cut
out shapes to outlines.

- Social Studies: Turtles.

Discussion - appearance, home,
habitat, food.

Activities - count shells on model
words to describe the turtle,
suggest a name, sketch the
turtle, measure with string
& count how many unit cubes
fit along the string, tell a
story on tape about the
turtle.

Upper left -

acquiring facts

Lower left - work

in gps, following
procedures,

Upper right -

imagination,
initiative.

Lower right -

discussion, storying,
sketching.

- Art activities: based on

- construction eg. blocks,
toothpicks, ice-cream sticks.

- sewing. - box work.

- clay

- play dough

- painting → finger, brush,
stick, toothbrush.

- drawing

- sketching

- collage → cutting & pasting.

Free choice & directed
activities.

Upper right

Lower right:

Perceptual Motor Programme.

$\frac{1}{2}$ hour every morning
chv involved in activities
to stimulate cross brain
thinking.

eg: rolling, cross crawling,
balancing, hopping, jumping,
high/low, balancing, catching,
(based on Jack Capon's
programme).

- Home corner, restaurant -
free play, dressing up.

- Days of the week; daily
referal to a chart to
name the day & describe
the weather.

- Spatial Awareness: location.
Walking to front, back, each
side of the school.

Chv complete an obstacle
course.

Completion of an activity sheet.

- Drama/Storybuilding
Use of turtle as a model,
passed around a circle. chv
contribute to a story. Lost /
Found framework.

Whole brain
stimulation +
cross-crossing.

Upper right
lower right.

Upper left
lower left.

Upper left
Lower left.

- lower right.

- Music - creative rhythms
& patterns relating colour,
using instruments.

lower right.

- Job/Contract list (given
3/4 afternoons per week).
eg: 1) life education follow up
sheet.

Upper right }

lower left }

2) Maths - contact work
for each grp. Follow up
sheet on addition for each
group for their level.

concept of job list

3) Creative storywriting
& drawing.

4) Clay - experimentation,
construction

5) Outdoor obstacle course.

6) Spelling - read sight
words to a partner.

- Measurement: length.

Look around the classroom.

Find 2 things longer than
your foot. Draw them.

Find 3 things shorter than
your foot. Draw them.

Upper left.

Lower left.

- Listening games eg: Missing
word in a sentence.

Blindfold - follow the
glockenspiel.

lower right

- Reading activity: Hickory Dickory Dock.
Rhyme written on a card.
Match sentence strips.
Match words to the chart.

Upper right.

Lower left.

- Maths: More/Less concept sheet. Colour the set in each row which has more/less.

Upper left.

- Puppetry: Chn make stick puppets. Work in gpo to devise a story & characters. Rehearse & perform for the class.

- Lower right.

- Upper right.

- Listening & Following Instructions.
Chn given a picture sheet. Teacher reads a list of instructions which chn complete on their sheet.

Upper left.

Lower left.

Lower right.

eg: Put a cross on the boy
behind the chair
Colour the third rabbit.
Put a ring around the
middle leaf above the bud.

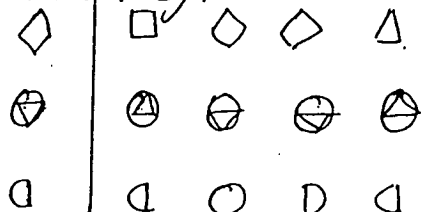
- Estimation / Capacity / Counting.
Find a box.

Guess how many blocks will fit into your box.
Record your guess.
Check to see how many blocks

will fit into your box.
Repeat for pencils.

- likenesses / Differences.

Sheet . eg:



Circle similar objects.

- letter / Sound works.

Letter S.

Follow up sheets - gpo of different abilities.

① Ss practice.

Draw pictures for these words
sun snake sit see.

Copy:

Seven sizzling sausages.

② Ss practice.

Write 4 names beginning with S.

Put these words into sentences.

sat so see say sand.

I play in the — pit.

She — on the chair.

I — with my eyes.

We — good morning.

Come to my house — that
we can play.

Upper left.

Upper left.

Lower right.

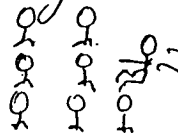
Lower right

Upper right -

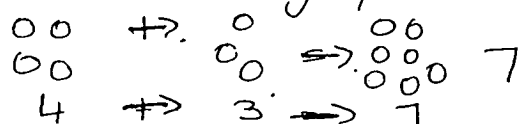
whole picture,
break down to find
missing word.

- letter / Sound Analysis:
Sheet - Picture of a circus:
How many things start with:
c ☐ a ☐ t ☐ b ☐

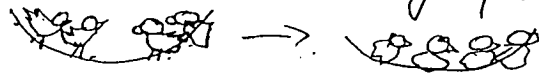
Upper left
Upper right

- Early addition group:
 How many? ☐
How many more come ☐?
How many altogether ☐?

Upper left

- Middle addition group:

4 + 3 = 7

Upper left

- Advanced addition group:

 $2 + 2 = 4$

Upper left

- Maths - Time:
How long does it take?
Let the marble roll down.
(a toy marbleworks).

Upper left
Lower left
Lower right

- | | Guess | Score |
|---------------------|--------|--------|
| 1 roll | | |
| I can count to 10. | Yes/No | Yes/No |
| Clap my hands 20x | Yes/no | Yes/No |
| Do a jigsaw puzzle. | yes/no | yes/no |

group work →
involving procedure
interaction, discussion

- Spelling (daily practice & groups based on individual need)
Letters → names & sounds
Refer to test sheets to give individuals letters they need

2. 'at' words, sight words.

eg: cat
mat.
sat.
you
can.

3. 'end' words, sight words

eg bend
lend
send.
with
from.

4. 'ain' words, sight words.

plain
main
because
your
them.

- Chn practice 'Look-Say-Cover. Write-Check' each morning, in spelling memos.

- After lunch, each child tested by a partner on words. Teacher check.

- Words for each group put onto computer each week, chn test themselves on spelling disc for their group.

Upper right -
patterning.

lower right -
partner work,
discussion.

Upper left -
analysis, logic to
apply LSCWCh
procedure.

lower left -
following structur.
procedure +
working on
organized conten

likely to happen next.

Lower left.
Upper left.
Upper right.

- Tangrams. Match 7 pieces to a given pattern / picture.

Upper left
Upper right.

- Maths. Money.

Coins stamped onto a sheet

Colour the 5c coins red.

" " 10c " blue.

" " 20c " green.

" " 50c " yellow.

Lower right.

Upper left.

How many dollar coins are there? —

Sheet used ~~after~~ follow-up after discussion about coins & their attributes, chn observe & feel the coins in various games.

Application of Whole Brain Learning in the Classroom

A. Upper Left

acquiring facts, quantifying, analysis, logic

- 1- computer. eg tables.
2. chance & data activities. eg: collecting & collating information using tallying.
3. spelling rules eg: ae says a.
4. maths rules & concepts. eg: 10 ones = 1 ten
5. tangrams.
6. guided visualisation. eg: watching.

B. Lower Left

organised, structured content, procedures

Job/Contract List

1. Measurement eg: Capacity 'litre'. How many spoonfuls, cupfuls in a litre?
2. Maze
3. Painting eg: brush & odour experimenting
4. Spelling eg look-Say-Cover-Write-Check
Put words in sentences, dictionary meanings.
5. Contractions, use of apostrophe
6. Guided visualisation. eg: sequencing.

D. Upper Right

aesthetics, initiative, self-discovery, involvement, imagery

1. Job/Contract List. eg: listed activities. chn make choices. use initiative.
2. Spelling. eg: patterns. Look-Say-Cover-Write-Check.
3. Mnemonics eg: patterning.
4. Painting, construction.
5. Guided visualisation eg: images.
6. Association maps eg: brain storming, negotiated learning.

C. Lower Right

emotional, interpersonal, movement, discussion, sharing

1. Cooperative learning activity.
eg: Hansel & Gretel. What might Hansel have used to make a trail other than pebbles & bread?
(group discussion, reporting, problem-solving.)
2. Drama.
3. Stories.
4. Music - rhythm - tone
pitch - singing
5. Guided visualisation. eg experiences - emotion.

12th October, 1994

Dear

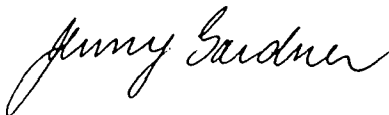
I am writing to request your assistance with my PhD research into Julia Atkin's model of teaching and learning, since it is now a year since you completed your final *Teaching for Effective Learning* workshop.

I must emphasise that I am interested in both use and non-use of the model and the factors which helped or prevented you using any of Julia's ideas. If you did use any of them I am interested to know which aspects, and if there was any useful outcome.

Anything you say will be treated as strictly anonymous and the information collated as a group response so that no individual can be identified.

I would appreciate your answers to the questions on the following page. If you would prefer to discuss the answers I will ring you at a time which is suitable for you. Please use the envelope provided to either return the answers, or the tear-off slip below.

Sincerely,



Jenny Gardner

.....

I would prefer to discuss the answers on the phone

Day Time(Option 1)

Day Time(Option 2)

Or I could be rung at home on

Signed

1. What were the main ideas which you took away from the workshops (i.e. new ideas and reinforcements)?

2. Were you able to implement any of the ideas?

Which aspects **helped** (e.g. other staff who were at the workshop, supportive principal, willing students etc.) or **hindered** (e.g. other school priorities, lack of enthusiasm from students/principal/other staff etc.) the implementation of any ideas.

3. If you were unable to implement any ideas, would it have helped to have had a supportive person to talk to about the use of the model? Any other form of support?

4. Do you have any other comments on the model, one year after attending the workshops?

P.S. I would really appreciate having the information by the end of October.

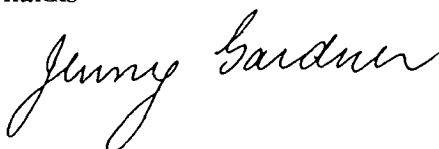
26th October, 1994

A REMINDER

Please forgive me if you have returned your responses to my questions about the Julia Atkin workshops.

COULD YOU PLEASE SPEND A SHORT TIME TO COMPLETE THE
QUESTIONNAIRE ABOUT THE WHAT YOU HAVE DONE OR NOT DONE WITH
ANYTHING LEARNED IN THE *TEACHING FOR EFFECTIVE LEARNING*
WORKSHOPS

Thanks

A handwritten signature in cursive script that reads "Jenny Gardner".

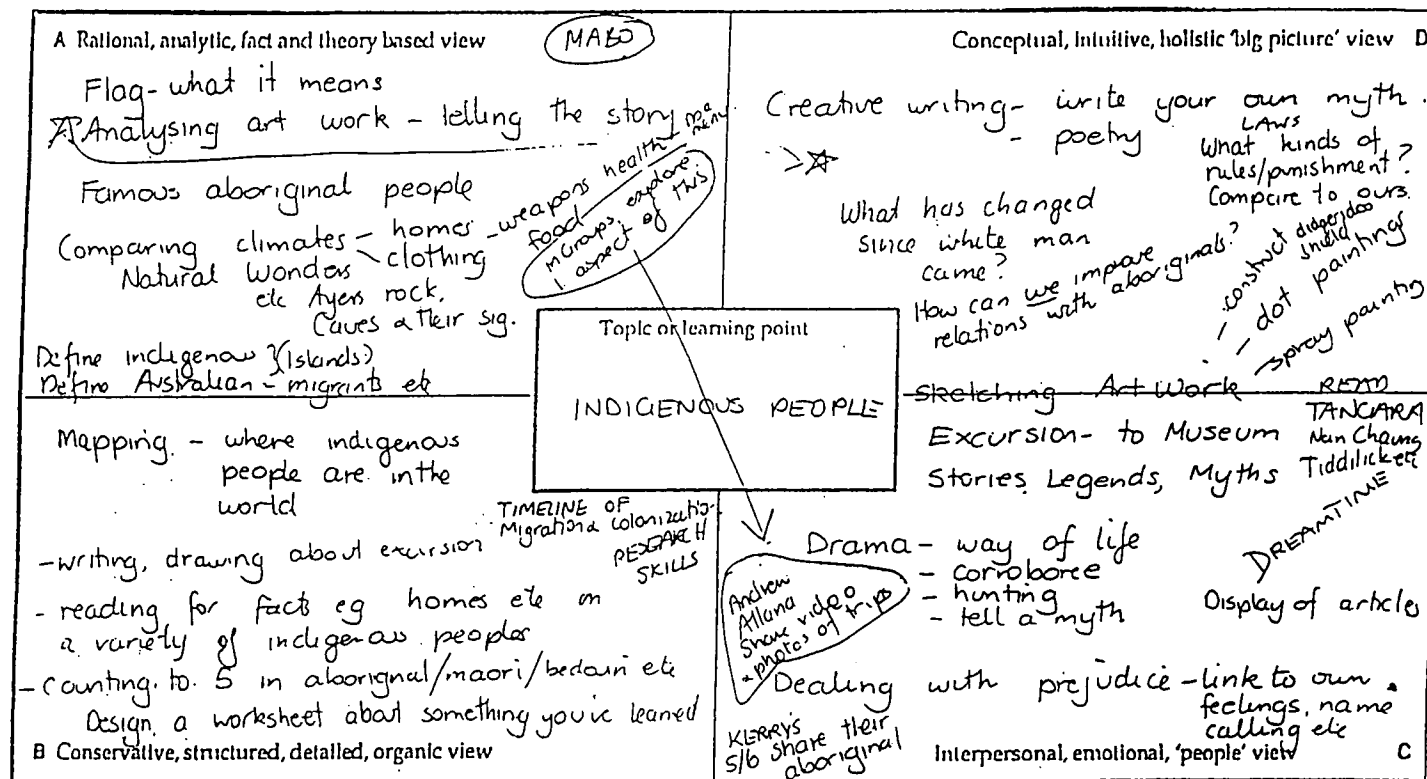
Appendix 8.

**Samples of use of strategies presented in the
Teaching for Effective Learning workshops**

Sample 1: Teacher planning for 'whole brain learning'

**Sample 2: Samples of children's drawings as a result of 'before' and
'after' visualisation activities**

**Sample 3: Samples of the use of mind mapping to show 'before' and
'after' knowledge of a unit being taught.**



© Gene Myers: adapted by Julia Allkin 1991.

Figure 3 Planning for Whole brain learning

Mindmapping - what we know
 (In groups)

- ★ Design a front door telling about your family this week, people, hobbies, favourite things, where you work etc. - diagrams - pictures - words
- Choose motif/theme and make a story picture parallel to aboriginal ones (Jill's work in hall)

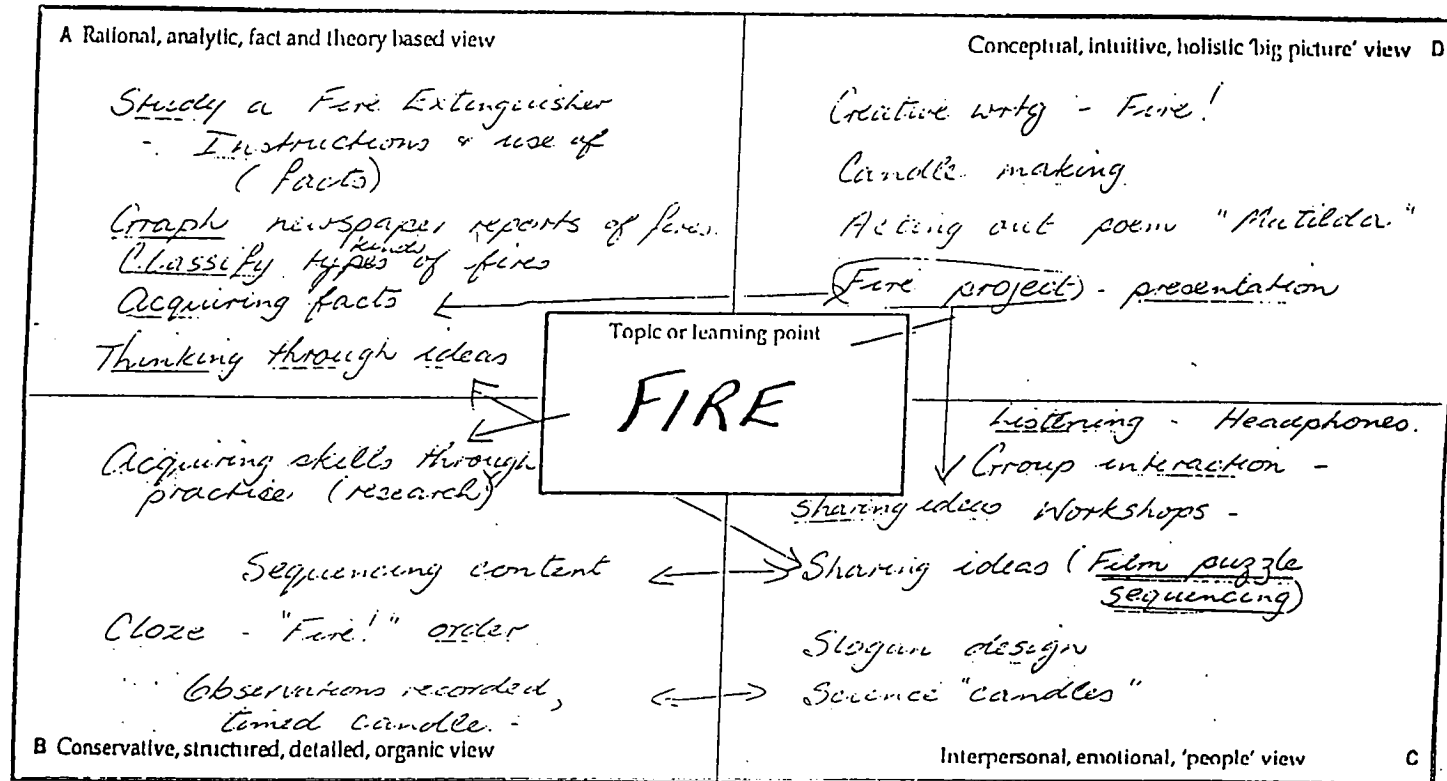


Figure 3 Planning for Whole brain learning

© Gene Myers: adapted by Julia Atkin 1991

5/6 A
Feb - Mar.

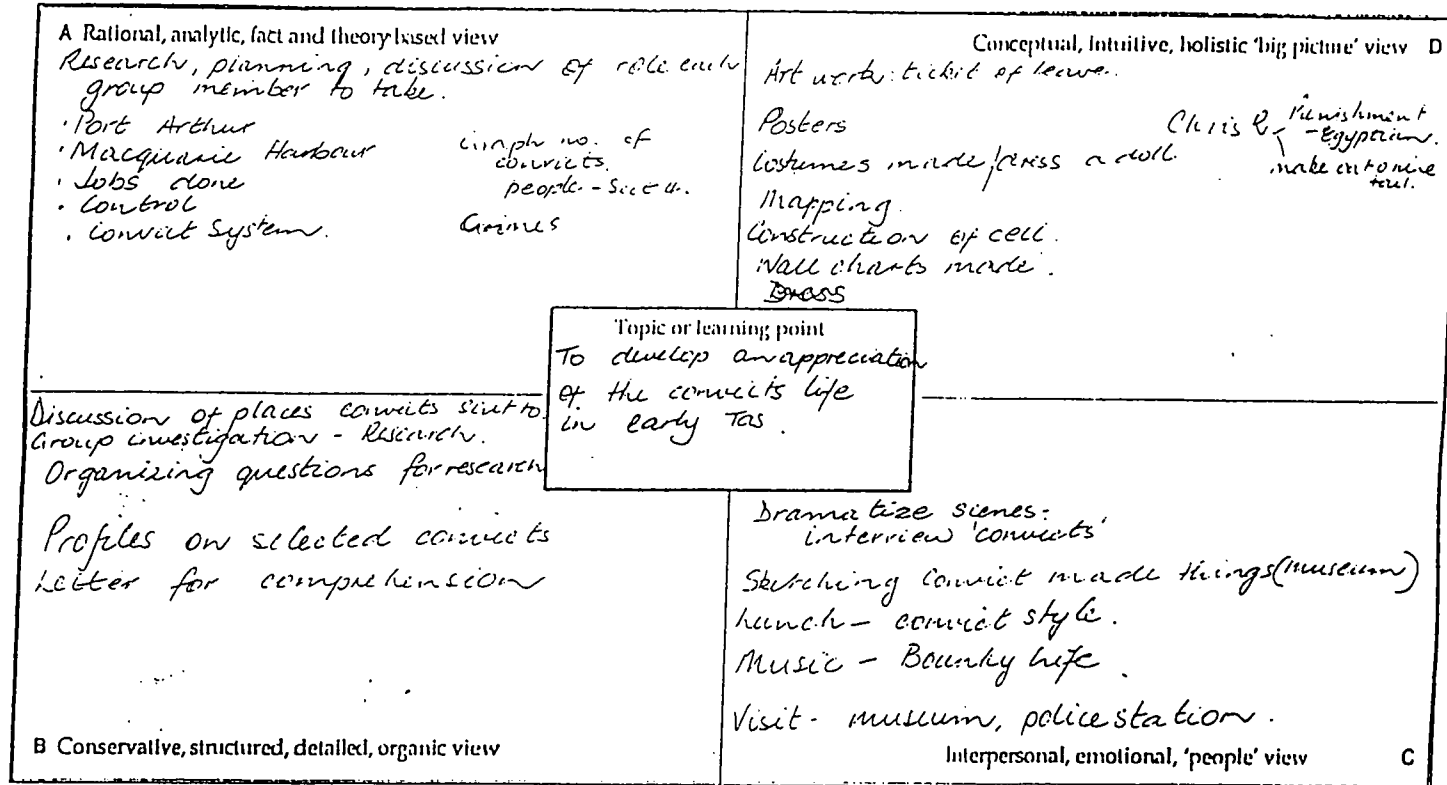


Figure 3 Planning for Whole brain learning;

© Gene Myers; adapted by Julia Atkin 1991

Landmarks
Pioneers All.

cat o' nine tails
Egyptian
Chris - Punishment then / New.

Children.
crimes
Police Station - food

Mitchell's house
- built first.

The grade 1 drawings on pp. 331–332 were the result of the following visualisation activity.

1 Drawing: 'I'm playing my favourite sport'

Teacher instructions:

- 5 minutes to sketch
- Number the sketch number (1)

2. Visualisation: 'I'm playing my favourite sport'

- Find a space by yourself
- Notice your breathing
- Where are you?
- What are you wearing?
- What expression do you have on your face?
- What are your feelings?
- What sounds can you hear?
- What colours can you see?

3. Drawing: 'I'm playing my favourite sport'

- 5 minutes to draw
- Number the sketch (2)

4. Evaluation

Look at your sketches (1 and 2)

In what way are they different?

- Think
- Talk to a partner
- Report to the whole group if desired

Some comments

'I had more ideas' (second drawing)

'I knew what to do' (second drawing)

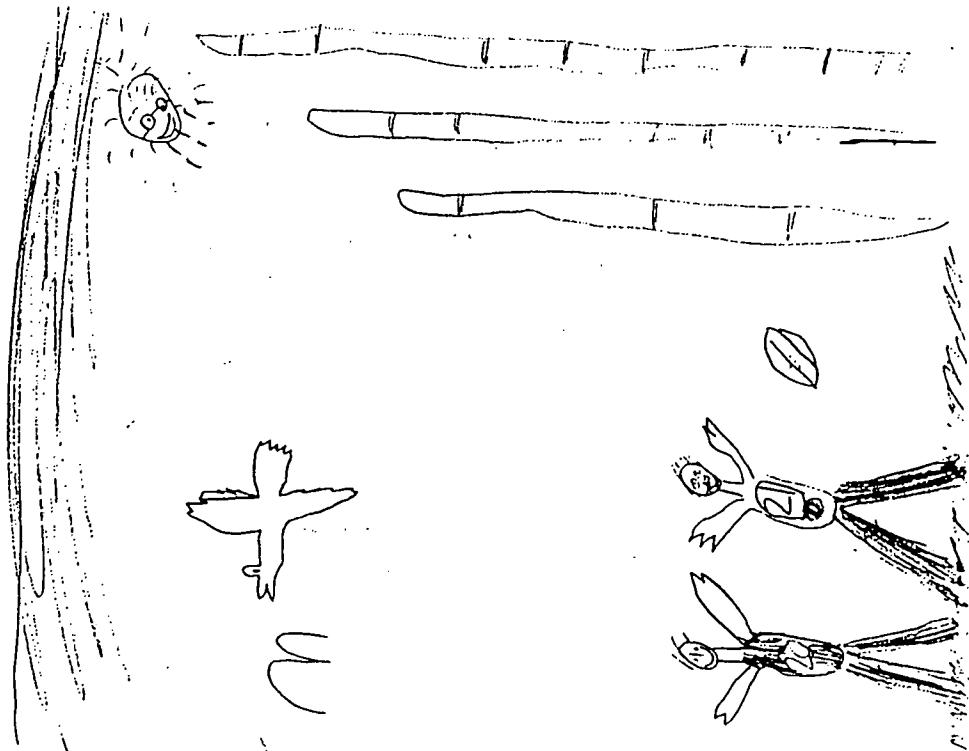
'They are the same'

'I like them both'

Grade 1 drawing on pp. 333–334—'Portrait of myself' were the result of the same process used for the activity 'I'm playing my favourite sport'

1

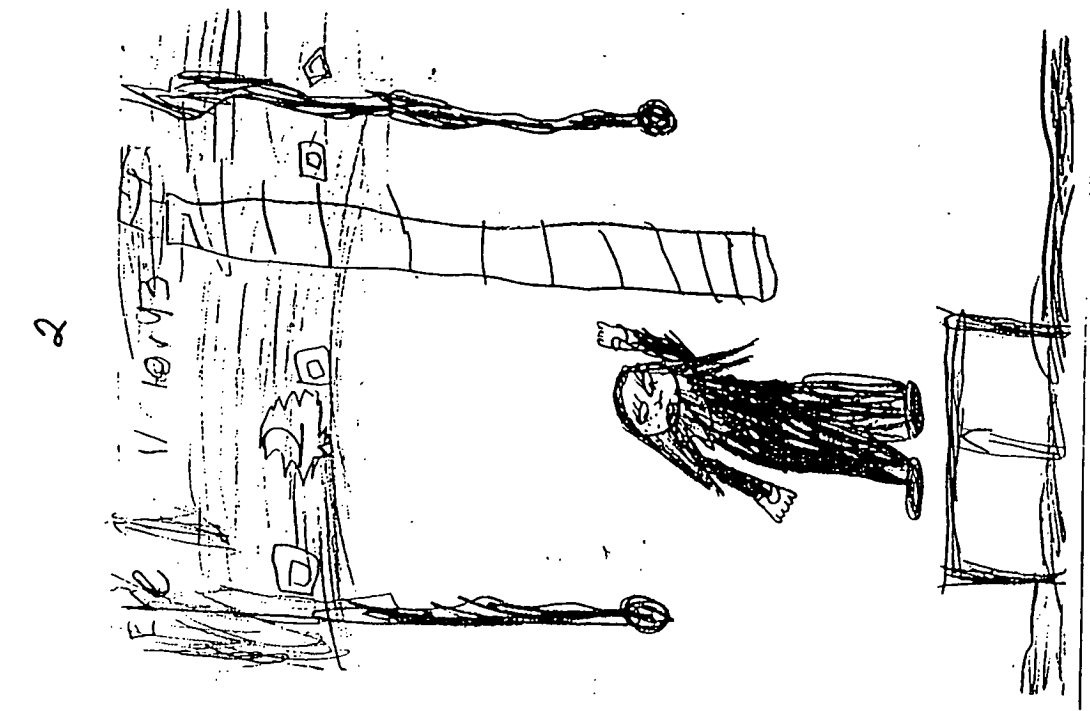
① Paul 11.10.93

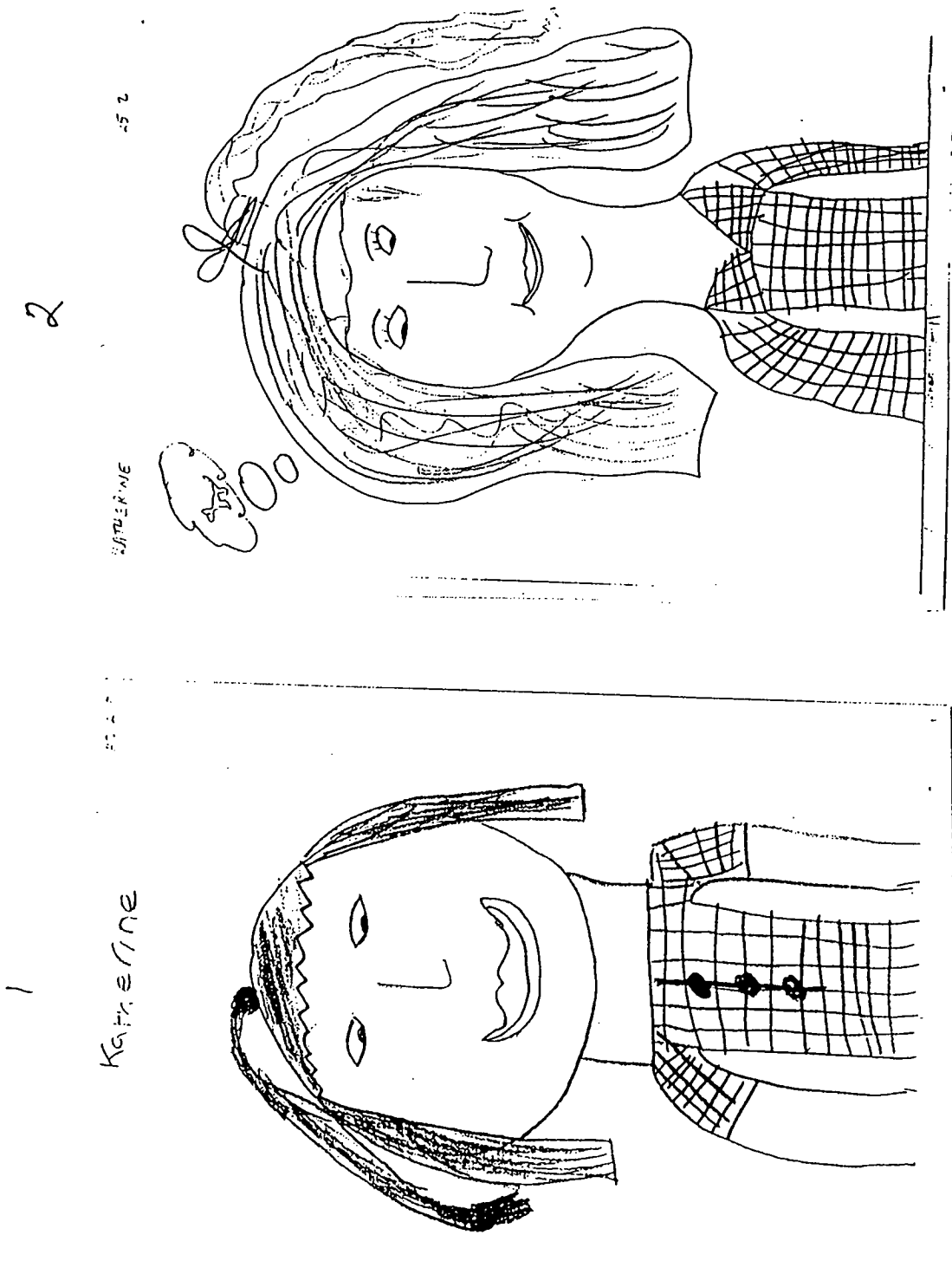


2

② Paul 11.10.93



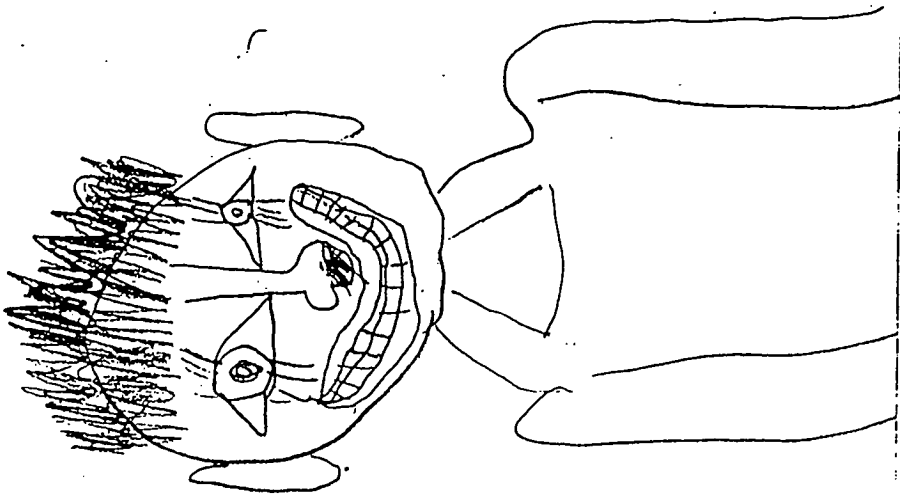




2

JULIAN

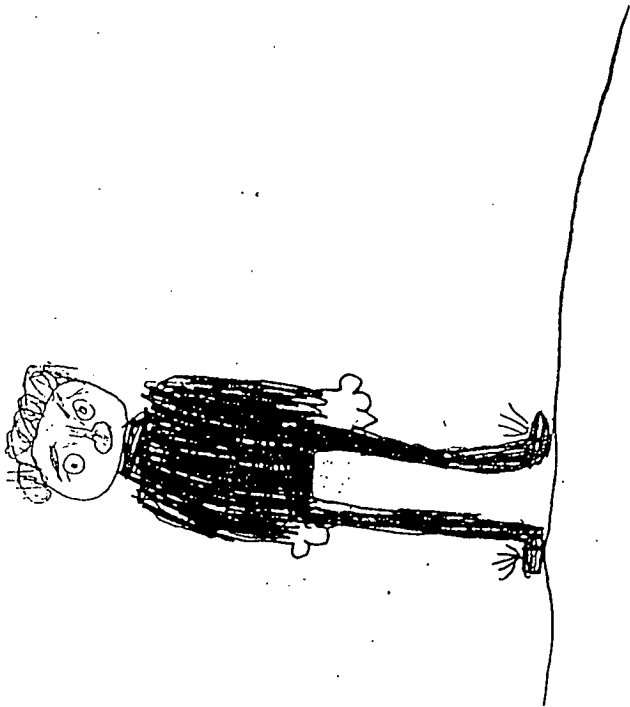
25.2.94

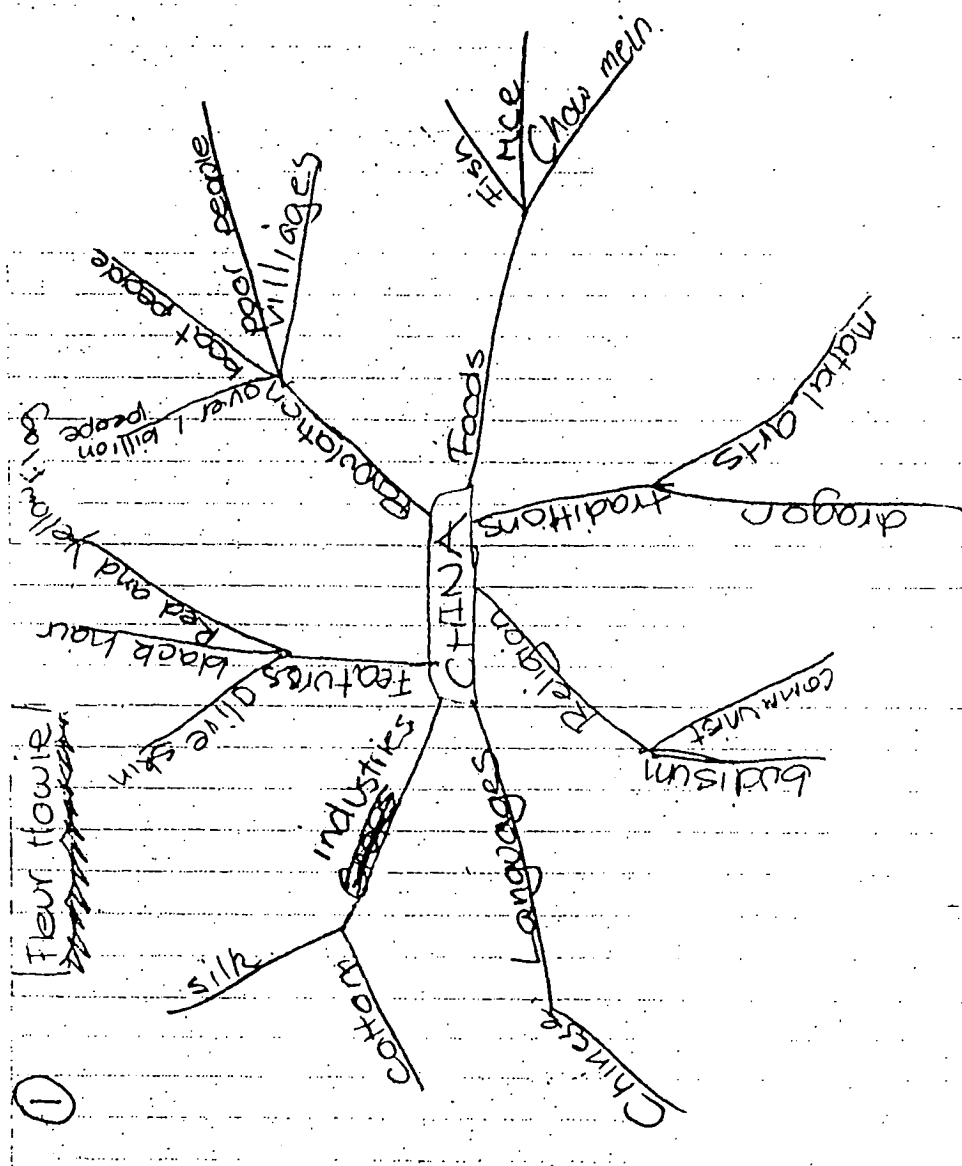


1

JULIAN

23-2-94





Fleur Howie 22.7.92

②

