Original Research

Researching Authenticity: The Relationship between Kindergarten Teachers' Espoused Theories and their Actual Practices

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Abstract

This paper reports on a study that investigated the relationship between 12 Melbourne kindergarten teachers' espoused theories and their actual practices. The Framework of Perspectives and Descriptions of Practice (Raban et al., 2003a, 2003b) was used to guide the study. The theoretical perspectives of 10 out of the 12 teachers' did not match their actual practices. The teachers who espoused critical considerations involved children in more interactive and explorative pedagogical experiences than the teachers who did not espouse such thinking. Higher qualifications or more years of teaching experience were not linked to greater congruence between the teachers' espoused theories and observed practices.

Key Words: Kindergarten teachers; theory and practice; pedagogy

Introduction

This paper is drawn from a larger study (Reynolds, 2003) concerning key stakeholders' perceptions of the early childhood curriculum in the Australian state of Victoria, and its purpose was to examine the relationship between policy, theory and practice. In this paper 12 of the teachers from the larger study were interviewed and observed to ascertain the relationship between their espoused theories and their actual practices.

In Victoria, early childhood teachers are keen to defend the integrity of their pedagogy and practice (Reynolds, 2003). Yet in order to guard what some would call the 'idiosyncrasies of early childhood education', and to be accountable as professionals to parents, committees of management, colleagues, and particularly to the wider community, teachers need to know 'why they do what they do'. They need to strive for authenticity; in other words, teachers need to practice what they preach. As Bloome (2003) asserts, actions should be consistent with stated beliefs if integrity is to be upheld. She contends that being authentic does not mean always having the answers but informing others that "… they are works in progress – that every day they think about how they can improve their {teaching} skills to better serve others" (p. 83). What needs to be remembered is that learning and development is a lifelong journey and that best practice means that teachers need to regularly appraise their strengths and areas of improvement (Bloome, 2003; O'Connor & Diggins, 2002; Zepke, 2003). It is imperative that early childhood teachers are able to articulate clearly their principles and practices, especially if they wish to engage in political debate about early childhood education policy, and to justify their professional status.

Teachers' Working Knowledge

Darling-Hammond (1996) argues that if early childhood teachers are serious about the right for young children to learn, then they need to explore the concepts of teaching and learning to a greater depth, and understand and develop personal knowledge to make teaching more powerful. Siraj-Blatchford (1999) reminds us that many factors are involved in teachers' reasons for favouring certain teaching techniques. She claims that previous training and experience, dispositions and values, views of childhood learning and development, the availability of materials and resources, and the environment and co-workers all have an influence on preferred teaching styles.

According to Maloney (1996) and others, a silent factor that has often been forgotten when researching teaching practices is a teacher's tacit knowledge. Bernstein (1975) calls this the invisible pedagogy. Giving importance to the same respect, Temple (2001) argues that the knowledge teachers' hold should affect how curriculum is developed and implemented.

Research conducted by Puttnam and Burko (2000) indicates that theoretical and abstract knowledge about teaching is sifted through personal beliefs, understandings, aims, and values, and that teachers make adjustments to fit their individual contexts. Yonemura's (1986) case study also shows that a teacher's practices are woven with a balance of professional values, technical theories, and personal knowledge. These researchers agree that teachers' thought processes including their technical and personal knowledge play an important part in determining their professional practices.

These findings are consistent with Argyris and Schon's (1974) notion of 'theories-in-use'. Spodek (1988) also suggests that it is these theories that underpin professional practice. He argues that theories-in-action cannot be developed by scholars. Rather, they are developed through the experiences of teachers and others, and tested and retested in clinical practice. Spodek argues that these particular theories provide a starting point for interpreting practice, and that they contribute to the decisions and actions of teachers. He holds that new theories about pedagogy will not easily modify value-oriented implicit theories, and this also applies to theories that develop as a result of teachers' experiences.

The Invisible Pedagogy

Teachers' tacit knowledge is what Goodfellow (2003) terms "the invisible elements of practice" (p. 3). She asserts that early childhood teachers may be expected to exhibit various personal and professional attributes, such as dispositions and attitudes, which are additional to the specialised technical and practical knowledge related to this field. In this context, Goodfellow refers to professional practice as thinking, reflecting, and professional judgment. She adds that professional practice includes what is known as professional and practical wisdom. She argues that the judgments early childhood teachers often need to make in their daily practices are often tacit, and these judgments influence the way they act. She considers that professional practice draws on personal qualities and experience, together with technical knowledge, in daily decision-making processes.

Furthermore, Spodek (1988) argues that teachers use working theories that they develop from practical experiences. It seems then, that implicit theories, including belief systems and value constructs as discussed by Yonemura (1986), together with practical experiences (Spodek), and technical knowledge gained from training, all influence how teachers implement programmes. Connelly and Clandinin (1984) and Elbaz (1983) also support the notion of teachers' practical application. Their research indicates that decisions made by teachers are often based on personal practical knowledge.

Schon (1991) also talks about knowledge-in-action, which he states is the knowledge that develops from teacher practice. He argues that knowledge is apparent in practical applications and that it is 'ordinarily tacit'. Schon asserts that it is through the process of reflection-in-action, which is "central to the 'art' by which practitioners sometimes deal well with situations of uncertainty, instability, uniqueness, and value conflict" (p. 50), that knowledge-in-action is acquired and developed over time.

Schon (1987) is an advocate of professional practice as a craft. He purports that this particular knowledge is gained over time as teachers go about their everyday tasks of teaching (1991). He argues that teacher knowledge is complex, and states that some areas of practice are difficult to define and articulate. Schon relates this back to reflection-in-action, when professionals, for example, become researchers in the practice context. He asserts that, when this happens, there is no dependency on 'technical rationality', yet new theories based on 'craftsmanship' can be constructed. However, Schon acknowledges that reflection–in-action is not widely accepted as a legitimate way to inform practice, because professionalism continues to be strongly linked to technical expertise. Although, O'Connor and Diggins (2002) posit that the empowering nature of reflective practice means that what teachers learn from their own experiences is just as critical, "as a tool for learning" (p. 7), as the teachings of others such as Dewey, Piaget and Vygotsky.

Integrating Theory and Practice

Spodek's (1970) view of integrating theory and practice is that foundations for curriculum building encompass more than technical theories alone. He takes the stance that these theories should be viewed as areas of knowledge, and considered as resources for curriculum, rather than being viewed as direct sources. Assuming that no one theory is a universal truth, perhaps early childhood teachers should consider theories about teaching and learning more as a guide to steer their practice. It seems that implicit theories such as personal values and beliefs, working knowledge or 'theories-in-action', together with technical knowledge all contribute to decision-making about curriculum.

The work of Spodek highlights how a number of critics view teaching as a complex profession that involves more than the application of technical knowledge. As Cassidy and Lawrence (2000) assert, it has been assumed for a long time that best practice is derived from an understanding of the explicit or technical theories that underpin the discipline. Although many researchers believe that technical theories alone are insufficient for informing practice, they do hold that these theories are critical prerequisites. The importance of the why as well as the how of teaching was also suggested by Verma and Peters (1975), in their study of child care teachers' stated beliefs and practices. This study found little correspondence between practitioners' stated beliefs and their observed practices. Because of these findings, the authors caution against overemphasising skills training and recommended a greater focus on theory in childcare education courses.

A more recent study conducted by Cassidy and Lawrence (2000) of 12 childcare teachers, which relates to implicit and explicit theories, supports the findings of Verma and Peters, as they also found incongruity between teachers' beliefs and practices. They argue that an over-reliance on practical experience or working knowledge may not always lead to quality practices. Cassidy and Lawrence maintain that it has often been recommended that if tertiary training institutions organise more practical experience for student teachers, then the quality of teaching could improve. However, they point out that this might create some tension, particularly if these teaching experiences are not the advocated practices promoted at the tertiary level. Another consideration is that increasing practical experience might not adequately foster critical reflection in terms of articulating the relationship between implicit

and explicit theories and practice, nor might it demonstrate the links between these constructs.

It seems that woven into the intricate network of pedagogical practices are both explicit and implicit theories and as Argyris and Schon (1974) suggest, a teacher's theory-in-use cannot be gauged just by asking questions. These authors are mindful that a theory-in-use needs to be constructed from observations of behaviour. The study reported below investigated the relationship between kindergarten teachers' espoused theories and their actual practices and so interviews and observations of practice were conducted, along with other forms of data collection.

Methodology

Research Question

The question of focus in this paper is: What is the congruency between kindergarten teachers' espoused theories and their observed orientation to practice?

Participants

Qualified teachers, with a minimum of three years training and with two or more years of teaching experience were drawn from 12 publicly funded kindergartens in the Melbourne metropolitan area. These kindergartens accept children who are four years by 30 April in their kindergarten year, and programme sessions run for 10 or more hours a week for each group of children. They were staffed by one qualified teacher and one unqualified assistant teacher. The 12 kindergarten teachers who volunteered to participate in this part of the study were part of a larger research project that involved interviewing 27 teachers about their beliefs and understandings concerning early childhood curriculum design and implementation (see Reynolds, 2003). All 12 teachers were female. They had between two and 25 years teaching experience and their qualifications ranged from a Diploma in Teaching (Early Childhood Education) to a Bachelor of Education (Early Childhood Education).

Method

Data collection involved a structured interview with each of the 12 teachers followed by field-work at their kindergartens using a variety of data collection techniques to collect multiple sources of data relating to both practices and teacher perspectives.

A structured interview was carried out with each teacher to find out and document the teacher's theoretical perspective. Questions asked related to their beliefs and understandings about the early childhood curriculum and their perceptions concerning different practices. The interview schedule had been piloted with three kindergarten teachers and modified. Most interviews were conducted at the participants' kindergartens at their request. The interview questions were forwarded to all participants prior to the interview, and the time taken for each interview did not exceed 60 minutes. Care was taken not to show any reaction to the participants' responses. All answers to the interview questions were recorded by hand and many respondents commented positively that the interview was not being tape-recorded. They stated that this was less threatening and, therefore, they felt more comfortable expressing their beliefs. After each of the teacher's answers was written down, they were read back for verification of accuracy.

Fieldwork involved the following six components. First, a one-hour running record observation of the teacher's interactions and conversations with the children and the teacher's activities during this period was done. Second, diagrams were made of the indoor

and outdoor environments and notes were recorded regarding the resources, and the materials and equipment available to the children. Third, relevant information was recorded on paper under each of the element headings comprising the descriptive framework (see the next section on the *Framework*). Fourth, an informal interview was conducted to gain further information about the teacher's personal philosophy, and to clarify observations and gain an understanding of the factors that influence the curriculum the teacher delivered. Fifth, a range of kindergarten documents were collected including Parent Information Booklets, newsletters, parent and teacher interview formats, programme plans and goals for the children, formats concerning record keeping for group and individual objectives, and the teacher's philosophy or mission statement. These documents provided additional contextual information. Sixth, an overall impression was written at the end of the day as an aide memoir to assist in coding the elements that made up the descriptive framework.

Framework of Perspectives and Descriptions of Practice Instrument

The *Framework of Perspectives and Descriptions of Practice* (Raban et al., 2003a, 2003b) designed by the Early Childhood Consortium at The University of Melbourne was used in this study. The Framework features five major theoretical perspectives: 'maturational', 'readiness', 'developmental', 'socio-constructivism' and 'critical consideration'. For references to the major theorists, assumed role of the adult and child outcomes for each of these five different perspectives see Reynolds (2003).

The *Framework* further consists of three dimensions: 'the environment', 'pedagogy' and 'partnerships'. For each of the three dimensions descriptive elements (a total of 22) are listed to guide the observer in tracking and documenting practices. For example under 'pedagogy' the elements listed are:

- Independence and interdependence
- Curriculum design and implementation regarding the range and variety of teaching/learning experiences
- Recognition of children's work
- Sustained attention to activities
- Record keeping for individual children
- Sources of contribution to curriculum planning and development
- Review and reflection on teaching and learning

Each dimension is placed on its own grid, with the five major theoretical perspectives along with the styles of teaching that characterise these perspectives along the top, and down the side the descriptive elements are listed. 'Critical considerations' is the theoretical perspective for which practices on the various elements are deemed to be exemplary or high quality, whilst 'maturational' is the theoretical perspective for which practices on the elements are not evident or operating at a very low level. Table 1 on the next page gives an example showing the interactions between theoretical perspectives and some descriptive elements for the dimension of 'pedagogy'.

Note that according to Raban and colleagues (2003a, 2003b) the five major theoretical perspectives in the *Framework* are not intended to be taken as a linear trajectory, instead it should be viewed as a kaleidoscope of multiple perspectives that do not exclude earlier understandings. The *Framework* was developed for the purpose of helping teachers to analyse, and review, current practices as they critically consider the role of the teacher in young children's learning and development.

TABLE 1: An Example for Observing and Recording the Relationships between Theoretical Perspectives Relating to 'Pedagogy' and Some Descriptive Elements of Practice in the *Framework*

Descriptive Elements	Maturational	Readiness	Develop-mental	Socio-Constructivism	Critical Consideration
Practice styles	**Managed**	**Directed**	**Guided**	**Engagement**	**Synergy**
PEDAGOGY					
Curriculum design and implementation regarding the range and variety of teaching/ learning experiences	No evidence of planned opportunities for teaching and learning	Some evidence of planning to reflect a progression in expectation for children over the year	Staff follow a pre-defined curriculum that reflects an expectation that children will learn basic skills	A responsive curriculum is designed to meet the needs, interests and abilities of children at the centre	Teaching and learning experiences demonstrate an interactive approach to curriculum development, and involve children and their families
Record keeping for individual children	Ad hoc observations collected and filed	Use of checklists/ observat-ions about each child's develop-ment but not linked to learning goals	Use of child observations linked directly to planned learning experiences	Collection of samples of work in portfolios with documentation that explicates learning goals	A variety of approaches including parental input to document children's progress in-depth beyond basic descriptions within a framework of planned review
Review and reflection on teaching and learning	Daily routines determined by a pre-existing timetable	Some evidence of time taken by staff to develop a year plan to reflect progression in expec-tations for children	Knowledge of children's needs and develop-mental capacities is used when planning learning experiences	Staff engage with each other and the children to assess their teaching and learning strategies	Family and community involvement with staff to reflect on and evaluate children's achievements

(adapted and expanded with permission from Raban et al., 2003b, p.75)

Analysis

All relevant policy, curriculum and parent information documents provided by the kindergarten teachers were examined to help gauge each teacher's espoused theoretical perspective. Additional information was gained from information given by the teachers during informal and formal interviews. These sources provided the researcher with sufficient information to identify each teacher's articulated theoretical stance in relation to early childhood curriculum issues.

Next, the relationship between each teacher's espoused theory and their practice was determined. This was done using the *Framework* (outlined in the preceding section). The various sources of data were drawn on to provide a complete set of information for each teacher under each of the 22 descriptive elements of practice in the *Framework*. Scores of 0 to 10 were given to the descriptive elements of practice (see Table 2 below). Scoring provided a way to establish the theoretical perspective most practised by the 12 teachers.

TABLE 2: Numerical Score Rating System Applied in this Study to the Framework of Perspectives and Descriptions of Practice

	Maturational	**Readiness**	**Develop-mental**	**Socio-Constructivism**	**Critical Consideration**
Practice Styles	**Managed**	**Directed**	**Guided**	**Engagement**	**Synergy**
Dimensions	Descriptive Elements under the Headings of: the environment, pedagogy, and partnerships – with children, families, communities and staff				
*Score	0 1	2 3	4 5	6 7	8 9 10

*These numerical scores are not to scale

The reason for calculating numerical figures for each case study under the three dimensions in the instrument, the environment, pedagogy and partnerships, was to determine an overall score and to compare focuses of practice within each perspective or style of practice. These numerical data were necessary to determine percentages, and to enter relevant information into a spreadsheet to create graphs. An overall percentage figure was also determined for each teacher to establish preferences regarding perspective styles. This overall style of practice preference was then examined against the determined theoretical perspective, so that a relationship between the preschool teachers' espoused theory and their practice could be established.

Reliability, Validity, Generalisability and Ethical Considerations

Issues of validity were primarily addressed by using multiple methods of data collection. Also known as triangulation, this approach enabled greater confidence in the analysis of the teachers' espoused theories and practices (Burns, 2000; Merriam, 1988; Stake, 1995). The validity of the descriptive elements within the *Framework of Perspectives and Descriptions of Practice* (Raban et al., 2003a & 2003b) for the teacher practitioners was not examined and this is a possibility for further research.

Confidence in the reliability of coding and scores was assisted by a mentor (the researcher's university supervisor) checking for possible bias and providing critical feedback. The findings from this study are to be viewed as tentative and are not generalisable. The number of participants in this study was small. Participants may have experienced some anxiety when they were being observed, which may have effected their actions and responses, and this, in turn, could have influenced the findings. Observations over a longer period of time would give greater confidence that teachers' actions were not influenced in any way by the researcher's presence or anxiety around participation in the study.

Ethical considerations were upheld and procedures required by The University of Melbourne were followed for this study. All confidential matters were respected, and the incorporation of a coding system and the use of aliases protected the anonymity of all participants.

Findings

The theoretical perspectives of 10 of the 12 teachers were different to what occurred in their practices (see Table 3 below). For example Teacher 1 stated that knowledge about curriculum theories was important because it helped early childhood teachers understand how children learn. She voiced that her theoretical stance was based on Piaget's cognitive theory, and, therefore, the children's activities need to be guided by developmentally appropriate practice. However, this teacher's espoused Piagetian perspective was not the most persistent orientation in practice, which was observed to have a strong orientation towards maturational principles, as highlighted below.

TABLE 3: Assessments of the 12 Teachers' Practices and Relationships between Practices and Espoused Theories using the *Framework of Perspectives and Practice* (Reynolds, 2003)

Teacher Number	Overall Rating of Observed Practices (Scale 0 – 10)	The Most Persistent Orientation to Practice	The Most Persistent Espoused Theory
Eclectic Theorising less Evident in Practice (n = 7 teachers)			
1	2.1	Maturational	Developmental
2	3.0	Readiness	Socio-Constructivism
3	3.1	Readiness	Developmental
4	3.6	Developmental	Socio-Constructivism
5	3.7	Developmental	Socio-Constructivism
6	4.3	Developmental	Socio-Constructivism
8	7.2	Socio-Constructivism	Critical Consideration
A Broader Range of Practices than Espoused in Theory (n = 3 teachers)			
7	5.5	Developmental	Readiness
9	8.0	Critical Consideration	Socio-Constructivism
10	8.3	Critical Consideration	Socio-Constructivism
Theory and Practice Congruent (n = 2 teachers)			
11	9.49	Critical Consideration	Critical Consideration
12	9.53	Critical Consideration	Critical Consideration

Teacher 1 left the children to choose their own activities and little direction or guidance was given. In fact, there was little evidence of planned opportunities for teaching and learning. The emphasis was on children determining their own learning, and for them to develop at their own rate. This teacher carefully managed the programme in terms of the children's welfare, and intervened mostly for safety. The children at this kindergarten were kept busy, and the teacher moved through the areas carefully supervising. She did not encourage the children to explore the environment in depth. This teacher observed the children playing but because she walked around constantly, opportunities to engage in dialogue with the children were rare. Many of the teacher's conversations involved the untrained assistant teacher and they, too, reflected organisational and supervisory comments. The following questions and statements, from Teacher 1 to the assistant, illustrate this observation. "Could you tell the children to finish up now?" "We need to hand out some of the art work today. The box is getting full." "Could you watch the children at the water tray, please?" and "Jimmy, don't do that. I told you before you might hurt someone."

Of the 10 teachers three showed a broader range of practices compared to their espoused theory, as illustrated with Teachers 7, 9 and 10 in Table 3. For example observations of Teacher 7's practices showed a persistent alignment to developmental theory, although conversations with this teacher revealed a theoretical orientation to readiness principles. This teacher voiced that she incorporated these principles particularly in relation to discipline

because she used strategies such as eye messages, consequences and choices. Informal discussions, programme information, the philosophy and other documentation also indicated that this teacher espoused a readiness orientation, however, in her work Teacher 7 showed a greater alignment to developmental principles. For instance in relation to transition and routines, developmental principles were more noticeable than this teacher's espoused behaviourist views. These routine experiences were pleasant for the children and there was a balance of structure and flexibility. This teacher appropriately informed the children when it was time to pack away, and in some situations choices were provided. At one time she stated, "Children we're going to tidy up soon, and when we do, let's all help. Guys in the block area, your building can stay up if you want." Music was played during these routine periods and the children were given adequate time to tidy up their play environments. She encouraged the children to complete tasks or constructions before joining their peers for whole group experiences.

Theory and practice was a match for the remaining two of the 12 teachers. In terms of theoretical understandings, for example, Teacher 11 commented that a number of theories influenced her practice such as Vygotsky, Gardner and Malaguzzi and that she mostly espoused critical considerations. She was observed to be a reflective practitioner and viewed the child through broad lenses encompassed by the family and the wider community to which the child belonged. In relation to teaching and learning, for instance, there was a large amount of evidence to suggest that this teacher's theories and practices were congruent. She implemented many strategies to support the children's learning and all key stakeholders were invited to contribute, including buddy programs with older school children, older siblings and grandparents. The children at this centre were encouraged to be self-directed, lifelong learners and to take charge of their own learning. A daily morning meeting was held with the children and parents were invited to share their ideas about the different experiences and projects. This collaborative discussion worked well for the children. By sharing and talking about their intentions for the morning with other members of the group, the children gained a clear understanding of their goals. They planned in partnership with the staff, through conversations and discussions, and family involvement was encouraged. Portfolios and project work were considered to be of value to the children's learning and investigations. These focuses were deemed to be valuable tools in helping the children to reflect and evaluate their own learning.

Teacher 11 was instrumental in fostering an interactive approach to curriculum development and she confirmed this approach when she reported that the programme was flexible and collaborative. She also talked about lifelong learning, and the importance of releasing the talents of all participants in the programme.

The findings from this study indicate that teachers who incorporated Bruner (1968; 1986) and Vygotsky's (1962; 1978) socio-constructivist perspective (see Table 1) into their practices encouraged reciprocal engagement between children and adults. However, in programmes where maturational, readiness and developmental theories were observed, the teachers were not as actively engaged in the activities and experiences that they had planned for children. It was evident in many of these cases that the children needed to be more challenged. The small number of teachers who espoused and practised critical considerations encouraged the children to plan, hypothesise, investigate, discover, and to reflect on their mistakes.

As shown in Table 4 below there appears to be no link between holding higher qualifications or having more years of teaching experience in the congruence between the kindergarten teachers' espoused theories and observed practices.

TABLE 4: Background information concerning the 12 kindergarten teachers and their theory and practice orientation

Teacher Number	Years of Teaching Experience	Highest Teaching Qualification	The Most Persistent Orientation to Practice	The Most Persistent Espoused Theory
1	21	Degree	Maturational	Developmental
2	2	Degree	Readiness	Socio-Constructivism
3	25	Degree	Readiness	Developmental
4	22	Diploma	Developmental	Socio-Constructivism
5	25	Diploma	Developmental	Socio-Constructivism
6	8	Grad.Dip	Developmental	Socio-Constructivism
8	15	Degree	Socio-Construct.	Critical Consideration
7	9	Degree	Developmental	Readiness
9	23	Grad.Dip	Critical Consideration	Socio-Constructivism
10	25	Diploma	Critical Consideration	Socio-Constructivism
11	10	Grad.Dip	Critical Consideration	Critical Consideration
12	8	Degree	Critical Consideration	Critical Consideration

Discussion

The study found that, with two exceptions, the espoused theories of kindergarten teachers were not congruent with their practices. In the two cases where teachers' theories and practices were consistently congruent, they were underpinned by critical considerations. The findings reported in this study are supported by studies conducted by Cassidy and Lawrence (2000) and Verma and Peters (1975), who also found incongruence between the beliefs teachers hold and what they do in practice. The present study adds to this body of research because it was conducted in the Australian context with qualified early childhood teachers.

This study, which found that most teachers espoused theories that did not match their actual practices, supports Spodek's (1970) argument that curriculum foundations embody more than technical theories alone. Teachers need to be able to accurately articulate 'why they do what they do', but it is unclear how best this can be achieved. It seems reasonable to suggest from this study and the work of others such as Verma and Peters (1975) and Cassidy and Lawrence (2000) that teachers need to be more aware of their invisible pedagogy. As Goodfellow (2003) suggests, teachers need to be encouraged to reflect on their personal beliefs and understandings to better understand their professional practice. Black and Halliwell (2000) and others concur, that if teachers become more aware of their 'invisible pedagogy' this could be a catalyst for professional growth. What needs to be noted is that working knowledge is multifaceted. It is certainly an area of professionalism that needs further investigation, because 'knowledge that works' is surely the aim of all early childhood teachers.

The findings from this research support the notion that teachers need to regularly discuss matters pertaining to the role of teachers in children's learning (O'Connor & Diggins, 2002), which adds weight to Fleer's (1995) comment that some teachers are not sure about their role in the teaching process. The teachers in this study who espoused critical considerations involved children in more interactive and explorative pedagogical experiences than the teachers who did not espouse such thinking. These teachers also mentioned that they had opportunities to critically reflect on their practices and to dialogue with other colleagues about best practices.

This study indicates, as does Spodek (1988) and Schon's (1991) view, that teachers also incorporate working knowledge or knowledge-in-action into their practices. Connelly and Clandinin (1984), and Elbaz (1983) extend this concept by suggesting that teachers not only use practical knowledge but that they also incorporate their own personal beliefs into teacher practices. In addition, Catron and Allen (1993) argue that teachers may also interpret theories differently and make adaptations to suit the needs of children and particularly communities. Indeed, these arguments all help to explain why so many teachers in this study demonstrated inconsistencies between their espoused theories and practices. It seems that by learning how to develop greater congruence between espoused theories, personal beliefs and understandings and actual practices, teachers will be able to defend the integrity of their pedagogy and practice, and in this way strive for authenticity.

Although this is a small study and the findings are not generalisable it shows, as does other research (Cassidy & Lawrence, 2000; Verma & Peters, 1975), that further research is required concerning the inconsistencies between kindergarten teachers' espoused theories and practices. As the present research indicates, pedagogical practices are not influenced by technical theories alone, but also from personal beliefs and values, and working knowledge gained from teaching experience. Investigations into the factors affecting teaching practices may help teachers to more competently articulate 'why they do what they do', and help them understand the relationship between theories and practices.

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