A Reflective Teaching Road Map for Pre-service and Novice Early Childhood Educators

Abstract

Teaching requires skillful and continual analysis of student performance. The need for self-questioning and self-analysis is heightened as historically used teaching practices may hold only limited effectiveness in today's currently diverse classrooms. A reflective teacher looks beyond day-to-day practices and commonly held beliefs to investigate teaching practices and assign meaning to student performance. Reflectivity centers on the responsibility of the teacher for the student's response to instruction and enables the teacher to make effective instructional decisions. Reflective analysis enables teachers to make appropriate instructional decisions; however, the skills to make such analysis may take instruction and experience, and, therefore elude many pre-service and novice teachers. In this article, we present guidelines and strategies to facilitate reflective behaviors appropriate for pre-service and novice teachers. Suggested guidelines are based on the mnemonic “CAR” (Context, Attention, Response). Guiding questions, known as “CAR-keys” were developed to provide a specific model for instructional decision making.

Keywords: Reflection, teacher preparation, instructional decision making.

Reflection

Teaching is a multifaceted process that requires a complex set of behaviors exhibited in a continuous stream of unpredictable situations with unpredictable students. Researchers have documented the importance of reflection as an appropriate way for teachers to enhance the effectiveness of their teaching practice. Reflection allows teachers to give deliberate thought about action with a view toward its improvement, face unexpected situations and individual student differences, connect theory to practice, and
acknowledge and deepen the understanding of how their own values, beliefs and experiences influence their roles as teachers (İşikoğlu, 2007; Johnson, 2001; Nolan, 2008; Ryan, Cooper, & Tauer, 2008; Schon, 1983, 1987). Since Dewey supported reflective teaching as “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and further conclusion to which it tends” (Dewey, 1933, p.9), the benefit of reflective teaching practices for pre-service and novice teachers has been well documented.

As early childhood settings become more diverse, reflective teaching is becoming increasingly important for teachers of very young children. Teachers in early childhood classrooms are facing growing numbers of children diagnosed with autism or other learning differences, with delays in emergent literacy skills, with primary languages different from the school norm, and with issues resulting from poverty (Allen & Cowdery, 2009; Walker, Carta, Greenwood, & Buzhardt, 2008). Failure by teachers in early childhood settings to plan and implement differentiated instruction and provide needed adaptations may result in students who fail to achieve full benefit from instruction (Allen & Cowdery, 2009; Winter, 2007). Furthermore, it is estimated that as many as 10% of preschool children who are otherwise described as typically developing are characterized as having behavioral difficulties (Thomas, Stanley & Hayes, 2010). Teachers in early childhood classrooms are called upon to have an arsenal of techniques for constructing classroom experiences and to facilitate successful interactions that benefit all students regardless of learning or behavioral differences. (Allen & Cowdery, 2009; Schiller & Willis, 2008). Additionally, to be effective, teachers of young children should possess the knowledge and experience to know when and how to use each technique and look beyond day-to-day practices to interpret student performance.

Reflectivity requires not only the skills of self-questioning and self-analysis, but also necessitates the willingness to self-monitor and to engage in critical exploration of one’s own professional practice, prejudices, values and behaviors. Reflectivity centers on the responsibility of the teacher for the student’s response to instruction. There is an established link between a deep level of inquiry and development of a teacher’s working framework of his or her values, knowledge and skills. Systematic reflection ensures the framework is sufficiently flexible to be expanded and modified based on each child’s learning experience (Brookfield, 1995; Dempsey, Halton, & Murphy, 2001; Freese, 2006). To participate in critical reflection, one cannot be passive but must possess critical reasoning skills coupled with analytical and evaluative abilities. An effective teacher practices the self-analytic exercise of reflection as a personal endorsement of a more complex view of teaching (Davis, 2006; Ryan et al., 2008).

Why Reflection Now

While the benefits of reflective practices have long been acknowledged, currently there are additional influences stimulating the use of reflective teaching practices by pre-service and novice early education teachers. The Response to Intervention (RTI) model
is receiving increased attention as a tiered approach for ensuring that a variety of evidenced based practices are available to meet the varying intensity of needs of all students. Currently multiple models of RTI are being implemented. Nonetheless, all models include requirements for teachers to not only regularly monitor progress but also to analyze progress monitoring data, reflect on each child’s progress and modify teaching practices based on each child’s response to instruction (Thomas & Dykes, 2011; Walker et al., 2008).

A second development in the education arena that is influencing the use of reflective teaching is the spotlight on accountability (Bruder, 2010). The accountability movement calls for early childhood programs o meet state and local guidelines. Standardization spurred by the accountability movement has teachers feeling that they are left in the wake of the evolving expectations as, in many circles, the accepted definition of what makes a good teacher is dependent on ever-changing accountability measures (Halquist & Novinger, 2009).

A third factor motivating the use of reflective processes by early childhood teachers is the realization of the important influence of the early years on each child’s academic and behavioral trajectory. As research acknowledges increasingly diverse student population in early childhood settings and the large number of students educationally and socially disenfranchised at an early age it, becomes increasingly important for early childhood teachers to create and deliver instruction using brain-based teaching strategies to create learning environments supportive of all students (Schiller & Willis, 2008; Souto-Manning & Dice, 2007, Walker, Ramsey & Gresham, 2004). More than ever, there is mounting evidence that the early years are critical, particularly for children with learning challenges and the increasing number of children who are culturally and linguistically diverse (Bruder, 2010). For these children, “business as usual” and simply waiting for young children to outgrow educational and behavioral challenges is not an option (Lin & Bates, 2010; Sprick, Booher, & Garrison, 2009; Thomas et al., 2010).

Reflective Teachers

As the role of teachers is shaped and redefined by current ecological influences, teachers, both novice and experienced, need reflective competencies and confidence in their abilities. As teacher preparation programs aim to produce teachers who value inquiry as a way to enhance professional practice, reflective practices should be advanced in order to equip teachers to recognize key moments in their classrooms (İşikoğlu, 2007; Meir & Stremmel, 2010). Reflective practices can be important in helping teacher candidates to build bridges between pre-service to in-service and between theory and practice (Ference, Clement, & Smith, 2008-2009).

While length of experience does not automatically make a teacher critically reflective, pre-service and novice teachers may lack both the capacity and confidence to analyze situations and self-correct a course of instruction to effectively serve children with
diverse learning needs (Lin & Bates, 2010; Nolan, 2008). It has been postulated, that for pre-service teachers to possess a deep understanding and willingness to self-reflect, teacher educators must purposefully support and facilitate development of reflective practices (İşkoğlu, 2007; Nolan, 2008; Yuen-Ling, 2008).

Typically, pre-service teachers are not as advanced in developing their own philosophy of teaching and schooling, nor have they come to grips with how their own experiences and philosophy impact their day-to-day actions in the classroom. Their reflection may be judgmental instead of evaluative and may lack focus, placing primary importance on themselves as teachers, as opposed to the children as learners (Davis, 2006). Nonetheless, numerous researchers have acknowledged that the process of reflection is an individualized activity difficult to quantify and evaluate. In general, novice and pre-service teachers do not automatically possess reflective skills and confidences. They need support from teacher educators in order to identify values and biases, to recognize contradictions in values and actions, to question assumptions, and to envision alternative strategies (Nolan & Sim, 2011). A challenge of pre-service programs, especially programs preparing teacher candidates for early childhood settings, is to equip new teachers with the theoretical knowledge tempered with practical experience so that they have both the skills and the grounding to analyze their teaching and respond reflectively.

The Practice and Process of Reflection

Productive reflection is an analytic rather than descriptive process (Davis, 2006) grounded in experiences and scrutiny of teacher’s own culture, point of view and philosophies of teaching and learning. Reflective practice is concerned with both what teachers think about as well as how they look at alternatives and how they make choices that shape their professional behavior. The content of reflection, the what teachers think about, covers the teaching-learning process, the selection of subject matter, the political and ethical principles underlying teaching, and assessment and instruction (Davis, 2006; Valli, 1997). Reflective teachers avoid focusing on the narrow perspective of right/wrong or pass/fail (Dempsey et al., 2001; Valli, 1997) to ensure that real life classroom situations, particularly challenging situations, accentuate potential learning opportunities (Freese, 2006). Reflectivity, therefore, becomes a loop process, not a one-time occurrence, whereby reflective observation occur leading to behavioral change on the part of the teacher, which generates a second level of reflection.

Unproductive reflection, such as frequently practiced by pre-service or novice teachers, is mainly descriptive without much analysis, and involves a listing of ideas rather than connecting them logically to behavioral change. Without critical reflection, a practitioner is doomed to repeat the same experiences over and over again. A reflective practitioner realizes that perfection is never achieved as each student, each classroom and each new day brings a new set of opportunities and challenges (Schiller & Willis, 2008).
Various researchers have proposed multiple levels or categories of reflection. (Valli, 1997; vanManen, 1977) however; other empirical works indicate that categories of reflection are overlapping rather than separate levels or domains (Davis, 2006). The following summary of categories is provided solely as a way to organize thought about reflection and not provided as definitive divisions.

**Technical reflection**

Technical reflection, as described by Valli (1997), focuses on the management or implementation of teaching or classroom management. Technical reflection involves thinking about how to achieve a set of agreed upon goals and then relating student performance (progress or lack of progress) to such nuts and bolts of instruction as the pace of instruction, the timing of reinforcement, instructional arrangement, and the availability of supports or modifications. Technical reflection is prescriptive and is based on standards of accepted practices and focuses on helping students learn through looking at ways teaching is organized and managed (Brookfield, 1995; Valli, 1997).

**Reflection In-Action and On-Action**

Reflection in-action refers to on-going, spontaneous in-the-moment real-time decisions and recognition of key moments during the act of teaching. Reflection in action is transformational in that it allows a teacher to recognize and understand to change aspects such as the course, speed or style of instruction in real-time (Meier & Stremmel, 2010). Reflection on-action is a retrospective view of important events after a lesson has been taught. A teacher practicing in-action and on-action reflection would think about the student’s progress, or lack of progress, in terms of the teacher’s awareness and interpretation of events, some of which might not seem important at the time. Effective teachers acknowledge that they interpret situations biased by their own prior experiences and expectations. Reflection in and on-action focuses on important events and interactions that may influence a child’s response to instruction. While technical reflection would call a teacher to think about the choice of teaching strategies, reflection in and on-action would involve the teacher in thinking about how the strategy was implemented.

Schon viewed the reflective process as occurring at various times in the teaching cycle (Schon 1983, 1987). Davis argued that it might be unreasonable to expect pre-service teachers to engage in reflection-in-action, as there are so many new tasks of teaching confronting them (Davis, 2006). The authors have found this ability to act, think, and react in real-time to be particularly problematic for pre-service and novice teachers. Frequently, for pre-service teachers, once lessons are designed and pre-approved by supervising or mentoring teachers, there is reluctance to waiver from the plan. Many times, however, alternate techniques may be needed as the lesson unfolds. It is this “with-it-ness” – the ability to assess student engagement and modify instruction in real time - that requires conscious and ongoing effort on the part of pre-service or novice teachers.
Critical reflection

Critical reflection is the highest level of reflectivity. Critical reflection forces us to examine our moral and ethical assumptions about children and teaching and question how these assumptions frame our educational practices (Brookfield, 1995; Davis, 2006; Valli, 1997). Critical reflecting uses the most complex levels of the cognitive domain: analysis, synthesis, and evaluation. Assumptions may be paradigmatic (assumptions that we use to order the world and, therefore, our teaching practices), prescriptive (assumptions about what we think ought to be happening), and causal (assumptions about how different parts of the world work and conditions under which these can be changed) (Brookfield, 1995). Critical reflection may be deliberative when emphasis is placed on decision making based on multiple sources of information: research, the teacher’s own beliefs, experience, and opinions of others (e.g., teachers, parents, or administrators). In order to maximize progress in the future, a teacher practicing critical reflection might think about (a) their beliefs of how children learn and behave, (b) their preconceived expectations of children’s academic or behavioral potential, (c) their use of research or others input to drive their choice of teaching strategies as the best way to meet an objective, or (d) their opinion of instructional elements that could be changed in the future (e.g., the context of instruction, attention to detail, expectations or assumptions).

A Model of Reflection

Purpose of the Model

Based on the need to support reflective teaching practices of pre-service teachers, a model of reflection was developed by the authors to assist pre-service teachers preparing for early childhood settings to internalize and operationalize basic minimal reflective processes. Success in a child’s later years is influenced by the skills and techniques used by those who teach them in their early years (Bruder, 2010; Lin & Bates, 2010). Pre-service and novice early childhood teachers, therefore, need guidance and scaffolding techniques to reach the higher levels of reflection including the ability to rethink, revise and resolve educational experiences as they arise (İşikoğlu, 2007). Guided reflection is needed for novice teachers to develop a level of sophistication for critical reflection with ample knowledge of child development and pedagogy (Yuen-Ling, 2008).

The authors sought to develop a model that would provide support for pre-service and novice teachers to learn steps and strategies to guide their personal reflection, to develop personal theories of teaching, and to become autonomous teachers (Yuen-Ling, 2008). An additional stated purpose of the model is to help resolve the frequently documented discrepancies between what pre-service teachers think about teaching, what they know about early instruction for young children, including students with learning challenges and what they practice as teachers (Bruder, 2010; Lin & Bates 2010).

The CAR-Keys Model

The model developed by the authors introduces practitioners to reflective practices, provides a mechanism for facilitating reflective thinking and suggests that various
approaches should be used in tandem. The model is intentionally basic in order to equip students with three easy steps to analyze student response to instruction, think critically on factors effecting student progress, and revise and plan for future instruction. Işıkoğlu found that while the use of reflective techniques is dynamic and developmental, pre-service teachers can demonstrate three stages of reflection: routine, technical and critical. Professional development and instructional and cultural change occur only at the critical reflection level where pre-service teachers focus on analyzing educational, moral, and social implications of classroom practices (Işıkoğlu, 2007). In developing the CAR-keys model, the three types of reflection described above, technical, in and on action, and critical, were re-labeled in order to design the model around a mnemonic (CAR) as it was felt that an easy to remember mnemonic would aid pre-service teachers in remembering and integrating the steps of the process.

To develop the mnemonic, reflecting *in and on action* became the *context* of reflection, the “C” of the CAR model. Context generates a heightened awareness of events and situations that arise during the instruction process. The “A” of the CAR mnemonic represents *attention to detail* or the *technical phase* of the reflective process. Technical details could be the pace and timing of instruction as well as strategies and techniques for differentiating instruction. *Response*, the “R” of the model, represents *critical reflection* and challenges a pre-service teacher to analyze and evaluate student response to instruction.

**Model Description**

The CAR model begins with “Instruction” geared toward targeted student learning outcomes. The three arrows radiating from the “learning outcomes” box point to the “Context”, “Attention” and “Response” boxes that provide a filter for the reflective process. To adequately reflect on each student’s progress toward his or her designated outcomes, a pre-service teacher using the model will be guided to analyze available data and ask key questions, the largest hexagon at the center of the model. The results of the reflection, the answers to the “key questions”, taken together with analysis of the student’s progress help a teacher determine “what to do next” (the box toward the lower third of the model).

As noted by the box at the bottom of the model, adequate progress guides continuation of planned instruction. A teacher utilizing the model following a finding of inadequate progress, on the other hand, will not continue down a non-productive road, but will be guided (by the arrows on the right side of the model) in ways to modify, adapt, or revise the instructional situation (e.g., differentiate instruction, modify the environment, provide accommodations).
Figure 1
CAR Keys to Achievement of Student Learning Outcomes

Your Instruction → Student Learning Outcomes

“C” Context Events & Situations
“A” Attention to Detail
“R” Response Assessment & Behavior

Analysis of Progress
- Data Analysis
- Key Questions
  - Context keys
  - Attention keys

Results of Reflection
“What Do I Do Now”

Continue with planned instruction
Take another route (modify, adapt &)

High Road - Progress
Successful Trip
In Progress

Low Road – No or inadequate progress
Identify Bumps, Potholes or Detours

The CAR model provides an efficient and effective way for pre-service teachers to think about each teaching situation and reflect on the response and progress of each student. The benefit of the model goes beyond the cuteness of the mnemonic and ease of implementation, however, to emphasize the way a pre-service teacher thinks about teaching and learning. It is hoped that as reflections become habits of the mind through repetition of the useful mnemonic, conscious teaching with higher levels of critical reflection will occur (İşikoglu, 2007). Admittedly, setting a model might stifle creativity in the reflective process; the model is not intended to be prescriptive, but to set a framework and empower awareness to spur further reflective experiences. As a pre-service teacher becomes more experienced, it is hoped that he or she would move into higher levels of the reflective process.

To implement the phases of the model, example “key questions” or CAR-Keys were developed. Examples of these key questions are provided in Table 1. The key questions may vary by classroom, teacher, or situation and are intended only to generate ideas within each reflective phase. Each teacher’s experiences and situations will guide development of key questions, initially with support and guidance from the mentoring or supervising teacher. It is expected that the questions will vary from basic to more sophisticated as the novice teacher gains in experience.

Simply supplying pre-service teachers with appropriate questions or prompts is no guarantee that they will question in greater depth how a student is progressing toward meeting desired benchmarks. It is hoped that the model will help pre-service and novice teachers understand that student progress (or lack of progress) is a product of many factors under the teacher’s control. The context of instruction, the teacher’s attention to details, and the teacher’s beliefs and assumptions all promote student progress. This model is intended to increase teacher effectiveness by prompting “why” questions following review of student engagement and learning. Additionally, the model is intended to help guide and supplement other reflective exercises, such as journaling or supervisory debriefing.

Asking questions of oneself helps develop expertise in both practice and perceiving. Without this structured approach, pre-service teachers may be prone to respond to poorly performing students with an “I’ve tried everything” approach. The CAR-Keys model encourages teachers to ask such questions as, (a) “Have I reviewed pertinent research?” (b) “What do authorities including researchers, the student, the family, and other teachers say about this student in this situation?” (c)“How is my opinion or expectations of this student’s lack of progress tempered by my own experience, culture, etc.?” (d) “What other alternatives are available?” and (e) “How can this student best be supported to succeed?”
### Table 1
The Road to Reflection: CAR-Keys for Implementing the CAR Reflection Model

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Key Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>C Context (reflecting in and on-action)</td>
<td>• Continuous awareness of events and situations&lt;br&gt;• Puts instruction into the situation in which it occurred&lt;br&gt;• Difficult, demanding or distracting situations may relate to competing “noise” in the environment, communication issues, cultural or social relationship issues.</td>
<td>• Did an event occur that was significant to the student?&lt;br&gt;• Was there a situation that went particularly well, therefore identifying effective approaches?&lt;br&gt;• Are there competing priorities that compromise instructional response (e.g., high stakes testing)?</td>
</tr>
<tr>
<td>A Attention to Detail (technical reflection)</td>
<td>• The pace and timing of instruction&lt;br&gt;• Arrangements (peer tutoring; grouping; timing, scheduling and choice of reinforcer)&lt;br&gt;• Choice of evidence-based teaching strategy&lt;br&gt;• More than a “bag of tricks” but the ability and willingness to apply a vast array of professional knowledge</td>
<td>• What modifications or adaptations are needed? Are available?&lt;br&gt;• What was the biggest challenge in delivering instruction? What worked well?&lt;br&gt;• Were the children engaged? How do you know?&lt;br&gt;• What classroom management techniques were employed? Did they work? Why/why not? How do you know?</td>
</tr>
<tr>
<td>R Response (critical and deliberative reflection)</td>
<td>• Beliefs, assumptions, expectations.&lt;br&gt;• Forces teachers to look at biases regarding students and student learning.&lt;br&gt;• Based on theoretical understanding and understanding and experiences with practices and priorities.&lt;br&gt;• Acknowledges and values choice</td>
<td>• Is the goal appropriate?&lt;br&gt;• Will this instruction help reach the goal?&lt;br&gt;• Was the teaching strategy implemented correctly?&lt;br&gt;• Did the choice of teaching strategy capitalize on the student’s preferred learning style?&lt;br&gt;• Was technical aspects of instruction appropriate for the student’s age functioning level, need for accommodations and modifications?&lt;br&gt;• What is the significance in learning this lesson? What is the next step? What will be the consequences of not learning?&lt;br&gt;• What is unique about this student? These students?</td>
</tr>
</tbody>
</table>
The CAR-Keys model will support early childhood teachers in two additional ways. First, as teachers reflect on the response to instruction of each student, teachers will be encouraged to recognize each student’s unique qualities and strengths valuing developmentally appropriate practices. Additionally, the CAR-Keys model can help teachers distinguish between responsibilities to students and responsibilities for students. Analytic skills gained through implementation of the model will allow teachers to move beyond merely describing classroom occurrences to analyzing student progress and continuing to revise lessons to insure instructional effectiveness.

Research Context of the Model

The CAR-Keys model was developed to support enhancement of pre-service teacher’s understanding and use of reflection to enhance instructional effectiveness for all students. Yuen-Ling (2008) described this cognitive development of the teacher as moving from “thinking self” and “thinking task” to “thinking child”. The guided reflective activities of the model is only one type of reflection, however, and should be used to guide and support other reflective activities, such as class discussions, focus groups, narrative inquiry, debriefing with clinical mentors or supervisors, or in preparation of journal or field diaries that pre-service teachers experience in the course of their preparation. Nonetheless, the model is intended to be an efficient way to enhance the reflective knowledge and skills of pre-service and novice teachers.

Models utilizing reflective teaching techniques support teachers to analyze and reconstruct teaching and learning experiences and employing multiple perspectives and an aggregate range of assumptions (Ference et al., 2008-2009; İşikoğlu, 2007; Yuen-Ling, 2008). Higher levels of reflective practices are needed by early childhood pre-service teachers to support both technical and critical levels of reflection. Early childhood teachers who are critically reflective have been found to be more child centered and better able to change their play and instructional practices based on their reflection (O’Keefe & Tait, 2004; Sumson & Fleet, 1996; Wood & Bennett, 2000).

Cremin and her colleagues researched the use of multiple models of teacher / teacher-assistant teamwork to improve student outcomes. The authors found that a model incorporating guided reflection was effective to equalize parity in the relationship, contribute to the feeling of empowerment by the assistant coupled with feelings that their skills were valued and important, increase efficacy of both parties for working with children with special needs, held untold benefits for all children and increased student achievement (Cremin, Thomas & Vincett, 2003).

Mentoring models that included guided reflection were found to increase enthusiasm for teaching, particular among highly vulnerable teachers and those early childhood teachers in poverty schools or schools with few resources. Furthermore, guided reflection in these models encouraged teachers to learn from their students (Souto-Manning & Dice, 2007). Similarly, in studying gender bias and the use of a reflective approach in pre-service programs, Zaman found that the use of guided reflection utilizing a reflective
observation checklist helped early childhood pre-service students engage in self-reflecting about their attitudes and expectations of early childhood students and of their own teaching (Zaman, 2008).

Reflective practices allow teachers to take responsibility for generation of their own knowledge base as through these practices teachers can acknowledge the possibility of informed responsive actions available to them (Yuen-Ling, 2008).

The Next Step

Future research is needed to determine the ease and benefit of implementation of the CAR-Keys model. This research should document the ability of the model to increase the ability of early childhood teachers to operate across boundaries of previous professional settings and conceptions of quality teaching. Research should focus on the ability of the model to transform teachers’ thinking, to improve the quality of children’s learning experiences, and to encourage early childhood teachers to question aspects of their own professional practice and knowledge base (Yuen-Ling, 2007). Hopefully, these activities will ease inclusion of children with special learning needs and will enhance learning outcomes for all children.

Conclusion

Reflection recognizes the complexity and on-going decision-making that must be integrated into day-to-day practices for teaching to be effective. The model presented allows for self-assessment based on the ability and freedom to self-question. Effective teachers analyze the instructional and educational implications of their work and gain confidence in their own abilities.

A caution should be noted. Honest reflection may cause anxiety and feelings of helplessness, inadequacy, frustration, despair, and disillusionment (Nolan & Sim, 2011). In a pre-service arrangement, a safe climate of openness, trust, and encouragement is critical (Dempsey et al., 2001). A teacher must take ownership in the relationship between teacher practices and student learning and behavior. Self-assurance, acceptance of personal responsibility and a commitment to improving teaching practices and outcomes for students is necessary (Freese, 2006).

Reflection is not an end in itself, however. Reflection supports teachers as they continue to learn and grow and gives insights into their strengths and weaknesses and values and beliefs. Reflection acknowledges and challenges personal assumptions and supports recognition of biases. Reflection leads to greater self-awareness – the first step toward positive change and both personal and professional growth.
References


