National Board Certification and Developmentally Appropriate Practices: Perceptions of Impact

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The study investigated a relationship between National Board certification and perceived use of developmentally appropriate practices (DAP). A self-developed survey, the Early-childhood Teacher Inventory of Practices, was e-mailed to participants. Participants included 246 non-National Board–certified (non-NBCT) and 135 National Board–certified (NBCT) early childhood teachers. Descriptives were reported for age, years of teaching experience, grade level currently teaching, ethnicity, degree type, certification type, and degree level. Inferential statistics were used to understand the differences between perceived use of DAP. NBCTs scored significantly higher than non-NBCTs in three of the four target areas and on the total of the scale. Pearson product–moment corelations were used to determine a relationship between years of experience or level of education and NBCTs’ perceived use of DAP. Years of experience were significantly related, but level of education was not. The findings indicate that NBCT teachers perceive they incorporate more developmentally appropriate practices into their teaching than do non-NBCT teachers.

Keywords: National Board certification, developmentally appropriate practices

Teacher quality has been in the public focus for decades and is a pivotal factor in determining student success (Darling-Hammond, 2000). There is a positive relationship between subject matter knowledge and teacher performance (Colker, 2008; Darling-Hammond, 2000), and coursework and education affect the quality of the teacher (Walsh & Tracy, 2004). Clotfelter, Ladd, and Vigdor (2007) reported a relationship between teachers’ effectiveness and years of teaching experience, and the teacher’s level of literacy has been found to contribute to teacher success (Walsh & Tracy, 2004). Clotfelter et al. found certified teachers to be more effective than noncertified teachers. Zemelman, Daniels, and Hyde (2005) found that effective teachers use practices that are experiential, expressive, holistic, authentic, reflective, social, cognitive, challenging, constructivist, collaborative, democratic, student centered, and developmental.
EDUCATION REFORM

The need for quality teachers has been the focal point of the education reform movements of the 20th century. *A Nation at Risk* (National Commission on Excellence in Education, 1983) escalated public concern regarding the state of education in America, expressing concern that the American education system was “failing to keep pace with a changing American and global society” (Harman, 2001, p. 1). In response, *A Nation Prepared: Teachers for the 21st Century* (Carnegie Corporation, 1986) concluded that American education was in a state of crisis and the solution was to devise a way of identifying and recognizing exemplary teachers by establishing a National Board for Professional Teaching Standards (NBPTS) (Vandevoort, Amrein-Beardsley, & Berliner, 2004). The central goal was to create a set of national standards for what excellent teachers would need to know and be able to do, and the board would grant advanced certification to the teachers who met those standards (Harman, 2001). In 1990, the National Board used the National Association for the Education of Young Children (NAEYC) position statement on developmentally appropriate practice (DAP), coupled with current research on how young children learn, to develop a set of early childhood generalist standards detailing what must be achieved to become an accomplished early childhood teacher (Sadowski, 2006).

DEVELOPMENTALLY APPROPRIATE PRACTICES

Research supports the use of developmentally appropriate practices and connects DAP to the developing brain of the young child (Rushton & Larkin, 2001). In early childhood classrooms where learning is child initiated, children appear to be more creative and to use more divergent thinking than students in more didactic, academic-centered classrooms (Hyson, Hirsh-Pasek, & Rescorla, 1990). Additionally, students in classrooms that incorporate DAP score higher on tests of basic skills (Marcon, 2002) and display fewer stress behaviors, such as nail biting, fidgeting, and aggressive behaviors than children in inappropriate environments (Hart, Yang, Charlesworth, & Burts, 2003; Jackson, 2009). Further, students in classrooms that incorporate DAP have stronger verbal skills (Dunn, Beach, & Kontos, 1994, 2000) and demonstrate greater mastery of basic skills, including receptive, expressive, and written communication skills; daily living skills; interpersonal relationship and social skills; and gross and fine motor skills (Marcon, 2002) than students taught in developmentally inappropriate settings. Additionally, students in classes and child care facilities where DAP is used have a higher view of their own self-competence (Jambunathan, Burts, & Pierce, 1999).

NATIONAL BOARD CERTIFICATION

Although limited in number, research studies indicate National Board certification affects teacher quality. Research on the effects and outcomes of National Board certification is mixed, but there are a few powerful studies (Bohen, 2001; Bond, Smith, Baker, & Hattie, 2000; Cavalluzzo, 2004; Jacobson, 2004; Tracz, Daughtry, Henderson-Sparks, Newman, & Sienty, 2005) suggesting that teachers who attempt or receive this higher level of certification produce more positive outcomes.
in student test scores than teachers who do not pursue it. Research also indicates that teachers who achieve National Board certification positively affect student learning and raise student test scores and performance (Cavalluzzo, 2004; Vandevoort et al., 2004), that students of National Board–certified teachers (NBCTs) have a deeper understanding of subject matter than students taught by non-NBCTs (Bond et al., 2000), and that NBCTs are more adept at meeting the individual needs of learners (Bond et al., 2000). Despite these findings, researchers also have found that National Board certification had little impact on student achievement (Goldhaber & Anthony, 2004, Harris & Sass, 2007). Overall, the evidence that National Board certification improves teacher quality and affects student learning is not conclusive.

PURPOSE OF THE STUDY

State and local school boards and teachers spend hundreds of hours and millions of dollars a year on National Board certification. This study examined the relationship between the National Board for Professional Standards Early Childhood Generalist certification and teachers’ perception of their classroom use of DAP among early childhood educators. The study was designed to compare the perceived practices of early childhood educators and provides much-needed new knowledge about the benefits of National Board certification.

GOALS OF THE STUDY

National Board–certified and non-NBCTs were compared by looking at their perceptions of the following criteria: use of DAP, knowledge of child development to plan instruction, use of developmentally appropriate teaching methods and classroom materials, connecting teaching and learning through authentic assessment, and use of developmentally appropriate instructional practices. Teachers’ perceptions were also compared on level of education and experience.

MATERIAL AND METHODS

Participants

The sample for this study was drawn from prekindergarten through 3rd-grade public school teachers in Louisiana. Criteria for participation included being a state-certified teacher with 3 or more years of teaching experience. Teacher e-mail addresses were obtained from school and school board websites. Out of 2,228 possible participants, 382 met all criteria. The return rate was 13.75% for non-NBCTs and 54% for NBCTs.

Thirty-one participants’ surveys were unusable because the participants did not fit the criteria for selection; therefore, the number of usable returned surveys was 382. There are 135 NBCTs participating in the study, and 247 non-NBCTs participating. The majority of respondents held elementary education degrees (61.8%), were in rural (43.5%) school districts, held a bachelor’s degree (54.2%), identified themselves as White (87.4%); 26.2% were kindergarten teachers.
Framework for the Study

The framework for the study is built around the belief that successfully achieving National Board certification (NBPTS Process) in the area of early childhood generalist affects teachers’ perceived use of DAP. One of the central premises of the study is that knowledge of child development, methods and materials, teaching and learning, and instructional practices are interconnected and woven together to form a nexus where DAPs occur. Through participation in the stringent requirements of National Board certification, early childhood teachers will perceive that they have refined their knowledge, understanding, and use of developmentally appropriate practices, resulting in a higher level of teacher quality in early childhood classrooms. The framework for the study is presented in Figure 1.

Instrumentation

A survey was devised for the study. The Early-childhood Teachers’ Inventory of Practices (E-TIP) (see the appendix) was developed to determine if there are differences between NBCTs and non-NBCTs’ perceived use of developmentally appropriate practices concerning (1) knowing and understanding how the young child learns, (2) selection and use of classroom materials and methods of teaching, (3) how teaching and learning interact in the classroom, and (4) the strategies and practices that guide instruction.

FIGURE 1 Conceptual framework.
The E-TIP is a 20-item survey divided into two parts. The first section pertains to participants’ demographic and background information, including level of certification, type of degree held, school setting, ethnicity, educational level, experience level, and current grade taught or position held. The second section of the E-TIP asks participants to rate their teaching practices on a 7-point Likert-type scale.

Instrumentation Validity

Reliability of the E-TIP was determined by computation of Cronbach’s alpha. The standardized alpha for the 20-item scale was 0.74, indicating a high degree of internal consistency (Trochim, 2006). A Pearson product–moment correlation coefficient was computed to assess the relationship between the subscales of Knowledge of Child Development, Methods and Materials, Teaching and Learning, Instructional Practices, and the Total of the Subscales of the E-TIP. There were significant correlations between the subscales of the E-TIP.

RESULTS

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of National Board certification on teachers’ perceived use of DAP in the areas of Knowledge of Child Development, Methods and Materials, Teaching and Learning, Instructional Practices, and the Total of the Subscales. Significant differences were found between the two groups of teachers on the dependent measures, Wilks’s $\Lambda = .83$, $F(1, 379) = 15.13, p < 0.05$, partial $\eta^2 = .168$. The results for the MANOVA for Knowledge of Child Development were not significant, $F(1, 379) = .05, p = .83$, partial $\eta^2 = .00$. The MANOVA results for Methods and Materials were significant, $F(1, 379) = 61.34, p < 0.05$, partial $\eta^2 = .14$. The MANOVA results for Teaching and Learning were also significant, $F(1, 379) = 15.83, p < 0.05$, partial $\eta^2 = .04$. Significant findings were also found for Instructional Practices, $F(1, 379) = 19.85, p < 0.05$, partial $\eta^2 = .51$. The total of the subscales was significant, $F(1, 379) = 37.17, p < 0.05$, partial $\eta^2 = .09$. Results of the MANOVA are displayed in Table 1.

Univariate ANOVAs for each dependent variable were conducted as follow-up tests to the MANOVA to see which dependent variables contributed to the significant multivariate $F$. The

| TABLE 1 | Multivariate Analysis of Variance on Subscales and Total of Scales |
|---------|----------------------------------------------------------|
| **NBCT** | **Non-NBCT** |
| **M** | **SD** | **N** | **M** | **SD** | **N** | **df** | **F** | **p** | **Partial $\eta^2$** |
| Knowledge of Child Development | 6.17 | 0.59 | 135 | 6.19 | 0.59 | 246 | 1 | 00.05 | 0.83 | 0.00 |
| Methods and Materials | 4.67 | 0.69 | 135 | 4.14 | 0.60 | 246 | 1 | 61.34 | 0.00 | 0.14 |
| Teaching and Learning | 5.18 | 0.94 | 135 | 4.80 | 0.85 | 246 | 1 | 15.83 | 0.00 | 0.04 |
| Instructional Practices | 2.86 | 0.54 | 135 | 3.60 | 0.48 | 246 | 1 | 19.85 | 0.00 | 0.51 |
| Total of Subscales | 4.72 | 0.48 | 135 | 4.44 | 0.41 | 246 | 1 | 37.17 | 0.00 | 0.09 |

Note. NBCT = National Board–certified.
ANOVA of Knowledge of Child Development was not significant, $F(1, 380) = .02, p = .89$, partial $\eta^2 = .00$. The ANOVA of Methods and Materials was significant, $F(1, 379) = 61.34, p < .05$, partial $\eta^2 = .14$. The ANOVA of Teaching and Learning was also significant, $F(1, 379) = 15.83, p < .05$, partial $\eta^2 = .04$. Significant findings were also found for Instructional Practices, $F(1, 380) = 17.32, p < .05$, partial $\eta^2 = .04$. The Total of the Subscales was significant, $F(1, 380) = 36.57, p < .05$, partial $\eta^2 = .09$. Significant differences were found between NBCTs and non-NBCTs in use and understanding of DAP, with NBCTs scoring significantly higher on the three domains of Methods and Materials, Teaching and Learning, and Instructional Practices and on the Total of the Subscales than non-NBCTs. Results of the ANOVA are displayed in Table 2.

### TABLE 2

|                          | df | MS  | F       | p   | Partial $\eta^2$ |
|--------------------------|----|-----|---------|-----|------------------|
| Knowledge of Child Dev.  | 1  | 0.01| 0.02    | 0.89| 0.00             |
| Error                    | 380| 0.35|         |     |                  |
| Methods and Materials    | 1  | 24.62| 61.34  | 0.00| 0.14             |
| Error                    | 379| 0.40|         |     |                  |
| Teaching and Learning    | 1  | 12.44| 15.83  | 0.00| 0.04             |
| Error                    | 379| 0.79|         |     |                  |
| Instructional Practices  | 1  | 4.56 | 17.32  | 0.00| 0.04             |
| Error                    | 380| 0.26|         |     |                  |
| Total of Subscales       | 1  | 6.95 | 36.57  | 0.00| 0.09             |
| Error                    | 380| 0.19|         |     |                  |

A one-way ANOVA was conducted to determine the effect of National Board certification on teachers’ perceived use of DAP in the area of Knowledge of Child Development. Results were not significant, $F(1, 380) = .021, p = .885$, partial $\eta^2 = .00$. No significant differences were found between NBCTs and non-NBCTs in use and understanding of child development to inform teaching practices. Results of the ANOVA are displayed in Table 3.

### TABLE 3

|                | df | MS   | F   | p   | Partial $\eta^2$ |
|----------------|----|------|-----|-----|------------------|
| NBCT           | 1  | 0.01 | 0.02| 0.89| 0.00             |
| Error          | 380| 0.35 |     |     |                  |

*Note.* NBCT = National Board–certified; $MS$ = mean square.

A one-way ANOVA was conducted to determine the effect of National Board certification on teachers’ perceived use of DAP in the area of Methods and Materials. Results were significant, $F(1, 379) = .6134, p < .05$, partial $\eta^2 = .14$. NBCTs scored significantly higher in uses of teaching methods and materials for instruction than their peers without advanced certification. Results of the ANOVA are displayed in Table 4.
A one-way ANOVA was conducted to determine the effect of National Board certification on teachers’ perceived use of DAP in the area of Teaching and Learning. Results were significant, $F(1, 379) = 15.83$, $p < 0.05$, partial $\eta^2 = .04$. NBCTs scored significantly higher than non-NBCTs in their use of teaching and learning to inform practices. Results of the ANOVA are displayed in Table 5.

A one-way ANOVA was conducted to determine the effect of National Board certification on teachers’ perceived use of DAP in the area of Instructional Practices. Results were significant, $F(1, 380) = 17.32$, $p < 0.05$, partial $\eta^2 = .04$. NBCTs scored significantly higher than non-NBCTs in their use of instructional practices that support DAP. Results of the ANOVA are displayed in Table 6.

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### TABLE 4
ANOVA for Methods and Materials

|                | DF | MS   | $F$   | $p$   | Partial $\eta^2$ |
|----------------|----|------|-------|-------|-------------------|
| National Board–certified | 1  | 24.62| 61.34 | 0.00  | 0.14              |
| Error          | 379 | 0.40 |       |       |                   |

*Note. MS = mean square.*

### TABLE 5
ANOVA for Teaching and Learning

|                | df | MS   | $F$   | $p$   | Partial $\eta^2$ |
|----------------|----|------|-------|-------|-------------------|
| National Board–certified | 1  | 12.44| 15.83 | 0.00  | 0.04              |
| Error          | 379 | 0.79 |       |       |                   |

*Note. MS = mean square.*

### TABLE 6
ANOVA for Instructional Practices

|                | df | MS   | $F$   | $p$   | Partial $\eta^2$ |
|----------------|----|------|-------|-------|-------------------|
| National Board–certified | 1  | 4.56 | 17.32 | 0.00  | 0.04              |
| Error          | 380 | 0.26 |       |       |                   |

*Note. MS = mean square.*

A Pearson product–moment correlation coefficient was computed to assess the relationship between NBCTs’ levels of education and their scores on the Total of the Subscales of the E-TIP. There was no significant correlation between the two variables, $r = .123$, $n = 135$, $p = .15$. Education level did not significantly relate to NBCTs’ perceived use of DAP.

A Pearson product–moment correlation coefficient was computed to assess the relationship between NBCTs’ years of experience and their scores on the Total of the Subscales of the E-TIP.
There was significant positive correlation between the two variables, \( r = .187, n = 134, p = .03 \). Years of experience were significantly related to NBCTs’ perceived use of DAP.

**DISCUSSION**

To determine if the NBCTs perceived they were using more developmentally appropriate practices than their non-NBCT peers, participant responses were analyzed. Participant responses were compared to the DAP indicators for the subscales of Knowledge of Child Development, Methods and Materials, Teaching and Learning, and Instructional Practices, as well as the Total of the Subscales of the E-TIP.

In DAP classrooms, teachers understand the developing child. In the area of Knowledge of Child Development, both groups of teachers studied indicated their understanding of the importance of relationships in early childhood education and believed they created responsive relationships, both indicators of DAP (National Association for the Education of Young Children [NAEYC], 2002). Both groups of teachers perceived that they viewed the early childhood classroom as a community of learners where all participants are respected and contribute to each other’s well-being. The teachers believed that they provided opportunities for children to explore and question objects, materials, and events. The NBCTs and non-NBCTs perceived that they valued partnerships with parents and the community and involved families and communities in many aspects of the child’s development and learning, as is indicated in the DAP guidelines (NAEYC, 2002). Both groups of teachers indicated that they understood children’s backgrounds and incorporated learning experiences to meet the multiple intelligences of children. There were no significant differences between NBCTs and non-NBCTs in their knowledge of child development.

Although the NBCTs and non-NBCTs indicated that they used their knowledge of child development to foster social skills, build positive relationships, and create nurturing classroom environments, significant differences were reported in regard to teaching pedagogy and curricular content. In regard to Methods and Materials, NBCTs scored significantly higher than non-NBCTs. The NBCTs perceived that they used a continuum of teaching strategies ranging from child-initiated to adult-directed learning, important indicators of DAP (NAEYC, 2002). They indicated that they recognized the developmental levels of individual students and employed teaching methods and materials targeted at the individual child’s level of development. The NBCTs perceived that they provided multiple paths to literacy, an important DAP indicator (NAEYC, 2002). They claimed to incorporate student-centered, hands-on learning, and active engagement with materials instead of relying strictly on worksheets to support learning.

Significant differences were also found in the area of Teaching and Learning. The NBCTs perceived that they used a holistic approach to teaching by integrating academic disciplines with other areas in emergent or thematic curriculum, and taught using themes and projects. The NBCTs perceived that they provided multiple paths to literacy, an important DAP indicator (NAEYC, 2002). They indicated that they used meaningful experiences to incorporate language and literacy into the curriculum to provide high-quality, meaningful language and literacy experiences across a developmental continuum. The NBCTs also indicated that they used their understanding...
of teaching and assessment to guide their practices. NAEYC (2002) suggests that teachers use a variety of appropriate assessment tools to plan instruction and gather information about student performance from a variety of sources. The NBCTs perceived that they did not rely strictly on tests for assessment to ensure student learning. Another DAP indicator met by the NBCTs was their perceived use of materials appropriate to the developmental level of the child to support learning through hands-on materials and manipulatives. The NBCTs perceived that they incorporated activities to support the fine and gross motor development of their students.

The NBCT group also scored significantly higher in the realm of Instructional Practices. The NBCTs studied perceived that they utilized teaching strategies based on their knowledge of individual children, assessment results, and their understanding of appropriate and challenging goals for teaching and learning, each of which is an important aspect of DAP (NAEYC, 2002). They indicated that they linked children’s language and culture to classroom learning and adapted teaching practices to be culturally sensitive. The NBCTs perceived that they did not rely on whole-group, direct instruction to make sure all children were learning, indicating that they developed and used a variety of teaching strategies to help children grow in all developmental areas. The NBCTs perceived that they relied on daily practice of academic skills and rote learning less often than non-NBCTs. Meeting the criteria for DAP (NAEYC, 2002), they perceived that they created meaningful lessons based on student interest and need.

The NBCTs studied viewed learning as connected to the emotional, physical, and intellectual development of the whole child, all vital elements of developmentally appropriate practice (NAEYC, 2002). The NBCTs indicated they met standards for DAP by setting up learning environments that were intellectually engaging and responsive and that encouraged children to explore and investigate their worlds. The NCBs claimed they based curricular choices on what is known about how young children learn and develop, another DAP indicator (NAEYC, 2002). The NBCTs perceived that they used their knowledge of how children develop to design, implement, and evaluate meaningful, challenging, and relevant curriculum across the physical, social, emotional, linguistic, and cognitive domains. The NBCTs studied incorporated challenging, active learning activities into their planning. The NBCTs perceived that they developed and used a wide variety of developmentally appropriate instructional strategies to support student learning. The NBCTs also indicated that they balanced teacher-directed, whole-group learning with child-directed, small-group and independent learning, further meeting DAP guidelines (NAEYC, 2002).

There was no significant correlation between education level and National Board certification. Education level did not significantly relate to NBCTs’ perceived use of DAP. A possible explanation is that National Board certification is considered a powerful, professional development opportunity that helps teachers expand and refine their understanding of teaching (Bohen, 2001). Rotberg, Futrell, and Lieberman (1998) found that most NBCTs believed the process of achieving certification provided them access to deep professional development. Beth Edwards (n.d.) of the North Carolina Department of Education claims that teachers who have participated in the National Board certification process found it to be the “most powerful professional development experience of their careers. They say the experience changes them as professionals and that through the process they deepen their content knowledge and develop, master, and reflect on new approaches to working with their students” (p. 1). It appears that NBCTs’ use of DAP was affected more by professional development through participation in National Board certification than by advanced coursework and higher level degrees.
Years of experience were significantly related to NBCTs’ perceived use of DAP. The NBCTs studied had between 4 and 42 years of teaching experience, with a median of 18 years of experience. The more experienced NBCTs perceived that they instituted DAP into classroom teaching in many areas and with more consistency than less experienced NBCTs. Jones, Burts, Buchanan, and Jambunathan (2000) found that experience was a support to successfully implementing DAP. Research has indicated a positive relationship between teaching experience and teacher effectiveness (Clotfelter et al., 2007). Teachers with substantial teaching experience are likely to be more successful teaching than those with less experience (Educational Testing Service, 2004).

CONCLUSION

The findings indicate that teachers who are certified as early childhood generalists perceive they use a broader range of DAP in their classroom teaching. One of the most significant findings of the study was that NCB early childhood teachers reported they understand and utilize the connected nature of all of the elements of teaching to inform their practices in developmentally appropriate instruction. Another major finding is that the NBCTs indicated that they incorporate developmentally appropriate practices throughout their curriculum by using methods for teaching to support individual learning by selecting teaching materials along a developmental continuum, and using methods that fit the diverse needs of their learners. A third important finding is that the NBCTs believed they understand the symbiosis between what they teach and what students learn, and use that understanding to guide their teaching practices in developmentally appropriate ways. Overall, teachers who had achieved National Board certification perceived that they met the indicators for DAP as outlined by NAEYC. There seems to be a difference in the practices of the two groups of teachers in regard to understanding and use of developmentally appropriate practices. Further study to comprehend the differences is warranted.

To understand if NBCTs’ perceptions of classroom teaching match their practices, it is recommended that a follow-up to this study be performed. Data collected through observations, interviews, and artifacts (including lesson plans, student work samples, weekly overviews, classroom schedules, grouping charts, correspondence to parents, and other indicators of teaching styles) would be beneficial to determine if the NBCTs’ practices mirror their perceptions in regard to classroom practices.

Additionally, research needs to be conducted to understand the experiences of successful candidates who apply for and pass the National Board for Professional Teaching Standards process in the area of early childhood generalist to understand the experiences and perceived impact on teaching practices of these participants. The research should focus on the following questions: What effect does the certification process have on teaching practices among early childhood teachers? How does National Board certification change teaching behavior? Were the NBCTs using developmentally appropriate practices before undergoing the certification process? Was their use of DAP strengthened after becoming National Board certified? What does National Board certification mean in terms of values, beliefs, and opinions to early childhood teachers? What is the perceived impact of National Board Certification in the area of early childhood generalist on early childhood teachers’ use of developmentally appropriate practices? What effect does the certification process have on teaching practices among early childhood teachers? It is recommended that data be collected through one-to-one, semistructured, open-ended, in-depth key
informant interviews by using guiding questions to obtain data related to participants’ meanings, with focus groups for follow-up questions.

State departments of education are debating whether to continue funding the incentives promised for achieving National Board certification. In South Carolina, one of the states with the highest percentages of NBCTs, The Education Oversight Committee voted unanimously to cut NBCT stipends (Smith, 2009). Due to a lack of research that supports National Board certification as an indicator of teacher quality, state departments of education are eliminating the pay raise teachers receive for successfully achieving the advanced certification. The results of this study provide evidence that the certification process of the National Board enhances teaching practices of early childhood teachers. It also provides support for continuing to provide the pay supplement to teachers with early childhood generalist certification.

With the emphasis on response to intervention (Wright & Wright, 2009) in elementary schools and assessments such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS; University of Oregon, n.d.), it would be interesting to see a study of the ways early childhood generalists differentiate instruction and match learning to student need in developmentally appropriate ways. The NBCTs studied believe they differentiate instruction and match lessons to student needs. Research needs to be done to find out how or if NBCTs provide reading and language arts interventions for their learners in ways that are developmentally appropriate to the individual child and small groups of children.

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APPENDIX

EARLY-CHILDHOOD TEACHERS INVENTORY OF PRACTICES (E-TIP)

1. I have state certification.
2. I have National Board Certification.
3. What type of degree do you hold?
   - Early Childhood Education
   - Elementary Education
   - Other (please specify)
4. What type of school are you in?
   - Urban
   - Suburban
   - Rural
5. What is your level of education?
   - Bachelor’s
   - Master’s
   - Master’s plus 30/Educational Specialist
   - EdD or PhD
6. How many years have you been teaching?
7. What is your ethnicity?
8. In which parish do you teach?
9. What grade do you teach?

Please rate your teaching practices using the following scale:
1-never 2-almost never 3-rarely 4-sometimes 5-often 6-almost always 7-always

1. In my classroom, I create a caring community of learners.
2. In my classroom, the individual child’s language and culture serve as springboards for planning.
3. In my classroom, I fill my students with important knowledge and information.
4. In my classroom, I use whole-group direct instruction to ensure all children are exposed to important information.
5. In my practices, technology is used by individual children for discrete skill development.
6. In my planning, I choose materials and equipment to meet children’s developmental levels.
7. In my teaching practices, I use worksheets to reinforce academic skills.
8. In my planning, I balance teacher-directed and child-initiated learning experiences.
9. In my teaching practices, I draw on children’s curiosity and desire to make sense of their world.
10. In my classroom, I use stickers and rewards to promote good classroom behavior.
11. In my planning, I integrate curricular areas through themes and projects.
12. In my planning, I provide time daily for extended child-initiated play.
13. In my planning, I provide daily opportunities to develop children’s language and literacy skills through meaningful experiences.
14. In my teaching, I use a variety of strategies to help children develop concepts and skills in mathematics, science, and social studies.
15. In my teaching, I provide daily practice of academic skills.
16. In my classroom, I provide opportunities for children to develop gross motor and fine motor skills using movement and hands-on materials.
17. In my assessment, I use tests to ensure the children are learning.
18. In my practice, I form partnerships with parents, colleagues and the community.
19. In my planning, I group students according to ability level to assure all children learn.
   - In my classroom, I incorporate strategies to meet multiple intelligences.