

A comparative study of first grade teachers' developmentally appropriate beliefs and practices in Finland and the United States

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ABSTRACT

The primary purpose of this study was to examine pedagogical beliefs and practices of first grade teachers in the United States and Finland. The theoretical framework was based on the National Association for the Education of Young Children's (NAEYC) position statement (published in 1987 and revised in 1997) regarding developmentally appropriate practices in early childhood. According to NAEYC, developmentally appropriate practices are child-centered in nature. NAEYC's position has responded to criticisms and debate over the years, clarifying and modifying when necessary. This study has attempted to expand the usability of NAEYC's position to the Finnish educational context.

Additionally, this study sought to investigate the relationships between background characteristics (teacher's education level, teaching experience, and class size) and beliefs and practices as well as factors that influenced the planning and implementation of teachers' classroom practices. Usability among Finnish teachers of The Teacher Questionnaire: Primary Version was also examined.

Data for this study were gathered using a modified version of The Teacher Questionnaire: Primary Version (Burts, Charlesworth, Hart, 1992). Teachers responded to appropriate and inappropriate belief statements reporting the strength of their beliefs on a scale of one to five. Similarly, teachers reported how often they included certain appropriate and inappropriate activities in their classroom on a scale of one to five. Background characteristics and perceived influences were also reported. The resultant samples comprised of 23 first grade teachers from the United States and 17 first grade teachers from Finland.

Results indicate that teachers in both Finland and the United States believe more strongly in developmentally appropriate than inappropriate practices. However, American first grade teachers reported stronger appropriate beliefs than Finnish first grade teachers. Teachers in the United States reported using more appropriate activities than Finnish teachers. Finnish teachers reported using fewer inappropriate activities than American teachers. These two findings each indicate a dimension of appropriateness. Appropriate beliefs and practices were related among the American sample but not among the Finnish sample. Inappropriate beliefs and practices were strongly related among both the Finnish and American sample. Education level proved to be the only background characteristic solely related to appropriate dimensions of beliefs and practices. Finnish and American teachers agreed that curriculum, government policies, and they (as teachers) had the most influence on the way in which classroom instruction was implemented. American teachers perceived significantly more influence than Finnish teachers from parents, the principal, colleagues, and the school board, which could indicate the more local nature of American education. It was also found that The Teacher Questionnaire: Primary Version maintained a relatively high level of internal validity among the Finnish and American samples suggesting that it could be a useful tool for further research in Finland and United States (where it has been used extensively).

Paul Berge

Vertailututkimus ensimmäisen luokan opettajien kehityksellisesti sopivista uskomuksista ja käytännöistä Suomessa ja Yhdysvalloissa.

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TIIVISTELMÄ

Tämän tutkimuksen tavoitteena oli selvittää ensimmäisen luokan opettajien pedagogisia uskomuksia ja käytäntöjä Yhdysvalloissa ja Suomessa. Tutkimuksen teoreettinen viitekehys perustui National Association for the Education of Young Children -järjestön (NAEYC) julkaisuun (ensimmäinen versio 1987, tarkistettu versio 1997), jossa tarkastellaan lasten opetukseen ja oppimiseen kehityksellisesti sopivia käytäntöjä. Tämä tutkimus pyrki myös laajentamaan NAEYC:n kannanoton ja kannanottoon perustuvan tutkimusinstrumentin (The Teacher Questionnaire: Primary Version) hyödynnettävyyttä suomalaisessa koulutus kontekstissa. Edellisen lisäksi tässä tutkimuksessa analysoidaan taustatekijöiden (opettajan koulutustaso, opetuskokemus, luokkakoko) ja uskomusten sekä käytäntöjen välisiä yhteyksiä ja opetuksen suunnitteluun sekä toteuttamiseen vaikuttavia tekijöitä.

Tutkimusaineisto koottiin Burts, Charlesworth ja Hart'in (1992) laatimaa opettajien kyselylomaketta (The Teacher Questionnaire: Primary Version) soveltaen. Opettajat vastasivat kehityksellisesti sopivia ja epäsopivia uskomuksia koskeviin väitteisiin asteikolla 1-5. Opettajat raportoivat myös samaa asteikkoa käyttäen, kuinka usein he toteuttivat kehityksellisesti Tutkimusjoukko koostui 23 yhdysvaltalaisesta ja 17 suomalaisesta ensimmäisen luokan opettajasta.

Tutkimuksen tulosten mukaan opettajat sekä Suomessa että Yhdysvalloissa uskovat enemmän kehityksellisesti sopiviin kuin epäsopiviin käytäntöihin. Kuitenkin amerikkalaiset opettajat raportoivat vahvempia kehityksellisesti sopivia uskomuksia kuin suomalaiset opettajat. Amerikkalaiset opettajat käyttivät myös enemmän kehityksellisesti sopivia toimintoja kuin suomalaiset opettajat. Suomalaiset opettajat käyttivät vähemmän kehityksellisesti epäsopivia toimintoja kuin amerikkalaiset opettajat. Nämä kaksi löydöstä osoittavat omalla tahollaan kehityksellisen sopivuuden ulottuvuuksien laajuutta. Kehityksellisesti sopivat uskomukset ja käytännöt korreloivat toisiinsa amerikkalaisten opettajien aineistossa mutta eivät puolestaan suomalaisten opettajien aineistossa. Epäsopivat uskomukset ja käytännöt olivat vahvasti yhteydessä sekä suomalaisten että amerikkalaisten opettajien keskuudessa. Koulutustaso oli ainoa taustatekijä, joka oli yhteydessä sopiviin uskomuksiin ja käytäntöihin. Sekä suomalaiset että amerikkalaiset opettajat näkivät, että opetussuunnitelmalla, koulutuspolitiikalla ja heillä itsellään opettajina oli suurin vaikutus siihen miten luokkaopetusta suunniteltiin ja toteutettiin. Amerikkalaisessa koulutuksen suunnittelun ja toteutuksen luonteessa heijastuu voimakkaammin paikallistason merkitys verrattuna suomalaiseen koulutukseen, sillä amerikkalaiset opettajat näkivät suuremman painoarvon ja vaikutuksen oppilaiden vanhemmilla, koulunjohtajalla, opettajatoverilla ja kouluneuvostolla kuin suomalaiset opettajat.

Koska tätä tutkimusta varten sovelletun kyselylomakkeen sisäinen validiteetti osoittautui suhteellisen korkeaksi, voidaan tässä tutkimuksessa sovellettua tutkimusinstrumenttia hyödyntää jatkotutkimuksiin sekä Yhdysvalloissa että Suomessa.

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1 INTRODUCTION

“Success in life is not the product of acquired academic skills; rather, success in life is the product of a healthy personality” (Elkind, 1988, 192). These words ring as true now as they did when they were written. They will continue to hold true for generations to come. Psychologist David Elkind was speaking on behalf of young children when he wrote those words over a decade ago. His words came to us then as they do now within an educational atmosphere that values academic achievement measured on standardized tests. This same educational environment pushes second grade curriculum into first grade and first grade curriculum into kindergarten. It values children based on what they know instead of who they are.

There is certainly nothing wrong with academic achievement. Should it be, however, the sole focus of formal education? Are we willing to value child characteristics other than academic achievement? If we are willing to view the child as a whole and multifaceted individual, then we must value characteristics of the child that go beyond academic performance. We must see the child as someone who is developing cognitively, socially, physically, and emotionally. We must understand that the child is naturally confident yet remains vulnerable. He is both capable and in need of guidance.

Formal schooling plays a large role in the life of a child fortunate enough to have it provided. Often times it occupies a significant portion of his day and is a place for engaging with peers and attempting new tasks. High quality formal education for the young child is paramount to his later school success and personal development. Classroom activities that engage the child, teachers that guide the child, and schools that provide a safe environment for the child form the foundation of high quality early childhood education.

There is likely agreement among early childhood professionals that respect for the child and a safe learning environment are vital components to high quality early childhood education. However, there is far less agreement on what kind of classroom activities best support children’s cognitive and social development. In general, this debate has pitted child-centered approaches, approaches that tend to focus on the whole child, against teacher-centered approaches, approaches that tend to be traditional and directed solely by the teacher. One chief participant in this ongoing debate e.g. in the United States is the

National Association for the Education of Young Children. Internationally, the Association for Childhood Education International has joined the debate.

The National Association for the Education of Young Children (NAEYC) is an American organization dedicated to advocating for the young child. In 1987 (revised in 1997) it published a position statement regarding developmentally appropriate practices (DAP) for early childhood aged children (Bredekamp, 1987). According to NAEYC's position, best practices in early childhood are child-centered, developmentally appropriate practices.

The Association for Childhood Education International (ACEI) has set forth its position in their publication *Global Guidelines for the Education and Care of Young Children* (ACEI, 2002). Their guidelines are more general than those published by NAEYC but also call on teachers to implement child-centered and "developmentally appropriate" curriculum (Renck-Jalongo et al., 2004, 145). Because NAEYC's position is more detailed than that of ACEI's and because ACEI has endorsed NAEYC's position, the NAEYC guidelines will provide the theoretical framework for this study.

NAEYC's position statement takes into account the whole child, his cognitive and social as well as his physical and emotional development. It applies to education and care concerning infants as well as first, second, and third graders. It is based on how children develop and learn, and it sees children in the context of family, culture, and society (Bredekamp & Copple, 1997).

NAEYC's position has been criticized. Some accuse the statement of focusing too much on the individual child and not enough on the culture within which the child exists (see Cryer & Clifford, 2003, 35). Others criticize its vagueness regarding individual appropriateness (Aldridge, 1992). Still others see it as neglecting the mentally and physically disabled (Carta, 1995). While NAEYC's position statement may not be specific enough for each critic's educational niche, it does provide a broad outline of appropriate practices and at the same time describes in detail the nature of and at times specific appropriate practices. Throughout the position statement, teachers are called on to be decision-makers, professional educators with knowledge of child development as well as specific context knowledge.

Developmentally appropriate practices can be implemented in primary grade classrooms. Advocating for DAP should not be viewed as a call for uniform teaching methods but instead as an appeal to teachers and others responsible for classroom practices to focus on the whole child, to confront methods and activities deemed inappropriate, and to implement curricula and practices that are child-centered and appropriate.

The current study focuses on beliefs and practices of first grade teachers in two countries, Finland and the United States. First grade is generally the first year of formal education of children in both Finland and the United States. Along with previous care and educational experiences, first grade provides a foundation for later school and personal success. It is important to understand what first grade teachers believe regarding appropriate classroom practice. It is also important to know what they practice. Are there certain dimensions to beliefs and practices that can help us to better understand the overall conception of beliefs and practice? Also, do teachers use methods that are congruent with their beliefs? In addition to understanding beliefs and practices, it is important to prod the possible origins of beliefs and practices. What teacher and classroom characteristics are related to appropriate and inappropriate beliefs and practice? What are the factors that teachers feel influence their classroom practice?

This study will attempt to answer these questions in relation to NAEYC standards as well as comparatively between Finnish and American first grade teachers. It will attempt to place the teachers' responses within the educational and cultural contexts they exist. One additional goal of this study is to test the validity of The Teacher Questionnaire: Primary Version (Burts, Charlesworth, & Hart, 1992) among Finnish teachers. No prior use of the questionnaire among Finnish teachers could be found.

Terms such as “developmentally appropriate” and “developmentally inappropriate” will be used throughout this report. At times, other terms will be substituted that may have slightly different scientific meanings but will be used synonymously here. “Developmentally appropriate” may be referred to as child-centered, child-initiated, or constructivist. “Developmentally inappropriate” may be referred to as academic, didactic, teacher-directed, teacher-centered, or instructivist. Additionally, the terms kindergarten and preschool have different meanings in the United States and in Finland. Because this report has been written in Finland for a primarily Finnish audience, the Finnish definitions of

kindergarten and preschool will apply. That is, preschool will refer to the year immediately preceding first grade, known in the United States as kindergarten. Kindergarten in this report will refer to the years preceding preschool, generally education and care that serve three-, four-, and at times five-year-olds.

2 THEORETICAL FRAMEWORK AND BACKGROUND: NAEYC'S POSITION ON DEVELOPMENTALLY APPROPRIATE PRACTICE

2.1 Teachers' Thinking

Researching teachers' thinking is important because pedagogical beliefs are one of the major factors determining the decisions that teachers make in the classroom (see Vartuli, 1999, 489). Teachers' pedagogical beliefs are typically described as falling on a continuum. At one end lie behaviorist beliefs that support teacher-centered, didactic, and skills-based approaches to early learning (Spidell-Rusher, McGrevin, & Lambiotte, 1992). According to these beliefs, truth is known. Adults know what children need to learn and the teacher's role is to pass on the knowledge and skills to children within an adult-centered structure (see Einarsdóttir, 2003, 40). At the other end of the continuum lie phenomenological beliefs, which support child-centered or child-initiated approaches to learning (Spidell-Rusher et al., 1992). These beliefs assume that truth is emergent and that adults do not know all that children need to learn. Teachers working at this end of the belief spectrum facilitate children's play and work, guiding students as they explore a variety of activities and solve self-selected problems (see Einarsdóttir, 2003, 40). The majority of early childhood educators could be described as holding beliefs somewhere between these two extremes.

2.2 Origins of Teachers' Pedagogical Beliefs

Theories as to the origins of teachers' pedagogical beliefs are important if we wish to alter beliefs not in line with current research about best practice. Van Fleet (1979; see Einarsdóttir, 2003) hypothesizes that teachers acquire their pedagogical beliefs through three different processes. The first, enculturation, involves the experiential learning that people acquire throughout their lives. For example, teachers, through their own childhood education, are exposed to a variety of teachers and teaching styles. Many of their own pedagogical beliefs are rooted in this time period. Teachers may want to emulate some teaching styles experienced during childhood and not others. The second process, education, involves the directed and purposeful learning that takes place within the school and classroom itself. These experiences are intended to bring teacher behavior in line with school culture. Experiences such as actual classroom teaching and interaction with other teachers and administrators influence teachers' beliefs greatly. The third process, schooling, is the specific process of teaching and learning that takes place in teacher-training schools. These schools provide a means for learning appropriate classroom

practices as well as the myths and traditions of the teaching profession. While the notion of enculturation is likely beyond researchers' influence, both schooling and education could be domains in which it is possible to influence early childhood professionals.

As previously stated, teachers' pedagogical beliefs fall on a continuum between child-centered and teacher-centered, between a behaviorist view and a phenomenological view of humankind. If a child-centered approach toward education is desired in the modern classroom, it is essential to review its historical and philosophical underpinnings.

2.3 Child-Centeredness

2.3.1 A brief history

Many early childhood teachers openly embrace the concept of child-centeredness. While disagreement exists on the finer points of what constitutes best practice in early childhood, one would be hard pressed to find an early childhood professional who does not advocate their position based on the best interests of the child. Baker (1998, 173) explains the current mentality regarding child-centeredness. "Child-centeredness rescues the young, it is in sympathy with the young, it is more democratic than authoritarian teaching." Because of this warm ideal toward the conception of child-centeredness, its history has not been subjected to much critique or questioning.

Rousseau (1712-1778) is often considered the first to argue for a more child-centered pedagogy. His ideas focused on the relationships between the child and his "true human nature" and the conflict that was presenting itself evermore between the child and civilization. While his ideas were important, Baker (1998, 159) argues, "The key point for understanding the emergence of the centered child via Rousseau was not so much what was done with the children in Rousseau's pedagogies but that it was believed that something could be done at all and in fact ought to be."

This new line of thinking, that childhood was distinct from adulthood and in need of molding, led to philosophies and teaching practices intended to "redeem" the child. As Baker (1998) notes, public schools in Germany as well as early mention of public education in the United States were primarily focused on the salvation of children from "the old deluder," Satan. The religious beginnings of the common school in Germany eventually gave way to developmental approaches toward child education in the late

nineteenth and early twentieth centuries. However, these early “developmental” approaches were not parallel with what is considered developmental in the modern context. According to the culture-epoch theory, children were thought to progress through stages that mirrored human beings’ progression from “savagery” to “civilization.” Because the child was seen as “savage,” it was the “civilized” adult’s responsibility to guide the child toward a civilized state. The idea that civilization was the final and desired state fell in contrast to Rousseau’s notion that civilization was to be avoided and that “savagery” was desired due to its closeness to nature (Baker, 1998). The conception of childhood was made more complex by these different perspectives.

These beginnings included a number of other philosophers, psychologists, and educationists who all put forth ideas on the nature of quality education. NAEYC’s position statement has been influenced by many of them (Kostelink, Soderman, & Whiren, 2004, 21-22). Johan Heinrich Pestalozzi (1746-1826) was a Swiss philosopher who emphasized child-initiated activities and sensory learning. Robert Owen (1771-1858) was a Welsh reformer who emphasized positive discipline. Friedrich Wilhelm Froebel (1782-1852), the German philosopher considered the father of the kindergarten, stressed the importance of play in a child’s life and emphasized the value of childhood for its own sake and not just as a preparation period for adulthood. Margaret McMillan (1860-1931) was a British educator who focused on whole-child learning and emphasized the importance of working with parents. The American philosopher John Dewey (1859-1952) also influenced the modern conception of child-centeredness and developmentally appropriate practice. According to Hytönen, Krokfors, Talts, and Vikat (2003, 259) Dewey had “noticeable” influence on the prominent Finnish pedagogue Aukusti Salo. Because of this, Dewey will be discussed in slightly more detail than other child-centeredness philosophers.

The two most influential contributors to the psychological principles underlying developmentally appropriate practice are Swiss psychologist Jean Piaget (1896-1980), and the Russian psychologist Lev Semenovich Vygotsky (1896-1934) (Bredekamp & Copple, 1997). Additionally, Kostelink, et al. (2004) discuss the work of Piaget and Vygotsky in their analysis of developmentally appropriate curriculum. A brief discussion of both Piaget and Vygotsky will follow.

John Dewey is probably most known for his writings regarding the relationship between democracy and education. His writings have also influenced child-centered pedagogy. For Dewey, formal education was one of the tools used in the development of the citizen. Quality education, as Dewey saw it, was education that was authentic and connected to children's real lives. As Lattu (2003, 18) notes, Dewey wanted no part in experimental education where children had complete control over curriculum. Instead, education should be organized around "occupations." These occupations would include traditional skills related to production such as agriculture and cooking but would also include topics such as natural sciences and literature. Dewey did not believe education was a tool to prepare children for utilitarian working life (see Lattu, 2003, 18).

Additionally, critical thinking skills are essential to a quality education. Dewey (1934, 159), in his essay entitled "Education for a changing social order," argues that schools have been educating for a "static, [or] relatively fixed social order." Emphasis has been "put upon getting what are called the right answers to problems...instead of putting the emphasis upon finding out what the problems are..." In child-centered education children need the opportunity to engage in real-world situations presented to them appropriately by the teacher in order to develop critical thinking skills necessary for their role as citizens.

Vygotsky, working in the early twentieth century during a time of political change in Russia, set out to create a Marxist theory of psychology and child development. For Vygotsky, development took place in social settings of varying dynamics. These social and cultural experiences affect the way humans develop. Vygotsky saw cultural experiences such as formal education as a key to guiding children's development toward adulthood (Berk and Winslor, 1997).

In addition to arguing the importance of social and cultural context in children's development, Vygotsky described what he called the zone of proximal development (ZPD). The ZPD is the hypothetical place where learning happens and is defined as the distance between what the child can do on his own and what he can do with the help of a more competent child or adult. From the notion of the ZPD comes the idea of scaffolding. Scaffolding is a term used by teachers and other educationists to describe teaching methods and environments that allow children to build or construct new knowledge and skills on existing ones (Berk & Winsler, 1997). It is a key component to what is commonly known

as a constructivism. The contemporary child-centered values of socially and culturally relevant curriculum and the teacher's role in scaffolding are based partly on Vygotsky's work.

Jean Piaget developed a theory of cognitive development that viewed the child as progressing through stages. For example, at the age of about seven or eight children enter what Piaget labeled the concrete operational stage. This stage is marked by mental actions derived from physical actions. Children can begin to manipulate information with the assistance of physical materials (Richmond, 1970, 48).

Piaget's theory has several educational implications. Ruotanen (2001) reviews Kamii's analysis of educational principles taken from Piaget's work. First, learning is an active process that children construct from existing knowledge and new experiences. Second, social interaction among children is important because it helps the child escape his own egocentricity, which marks early stages of development according to Piaget. Third, activities should be based on actual experiences instead of language and symbols. The use of language and symbols is important, but children need to experience the actual phenomenon before they can represent it using symbols. They must go through the concrete operational stage before the formal operational stage.

2.3.2 Contemporary conception

The modern conception of child-centered education is based partially on the previous philosophies and theories. It relies on respecting the individual child and equality among individuals. Learning is viewed as active and cooperative. Teaching should be authentic so that children can learn in situations of everyday life. Play and teaching should coincide since it is play that allows the child to build on existing knowledge and skills. While the individual child is an important tenet of child-centered education, there is the risk that societal needs are marginalized. Child-centered education takes both the individual and society into account (Hytönen et al., 2003, 259).

2.4 The Beginnings of NAEYC's Position

The child-centered movement is one that has a long history with multiple phases and variations. While respect for the child and his individuality is a concept that many current early childhood professionals would embrace, there remains disagreement regarding how

that respect should be manifested in the early childhood classroom. Which practices, child-centered or traditional teacher-centered practices, are best for the child's cognitive and social well-being? As stated previously, the National Association for the Education of Young Children advocates for child-centered, developmentally appropriate beliefs and practices that support children's long-term cognitive and social-emotional development. NAEYC's position statement was published largely in response to the increasing tendency of early childhood programs to include "academic" approaches. The academic approach has increased in popularity in part due to misconceptions regarding child development. David Elkind (1981), in his book entitled *The Hurried Child*, describes a number of effects that "hurrying" can have on young children. Principally, this is increased stress. From Elkind's warnings and from extensive knowledge about child development and learning, NAEYC published its position (Bredekamp, 1987).

2.5 Teacher-Directed vs. Child-Centered Approaches

The debate over teacher-directed approaches and child-centered approaches toward early childhood learning is one that continues to be argued and studied by those concerned about the development of young children. Moreover, it is a question that both directly and indirectly affects many decisions a parent, care-provider, or teacher makes when considering what is best for a child. Most adults who have responsibility over some part of a child's daily life genuinely want to do what is best for the child. This is, however, difficult when there is so much disagreement about what is best. Do teachers need to "drill and practice" or "teach to the test" in order to prepare their students for mandatory standardized tests? What kinds of activities should parents do with their child at home? These questions and many others like them cross the minds of parents and teachers every day. They all ultimately ask, "How do I best assist the development of this child?" Within the early childhood classroom, this becomes a question of teacher-directed vs. child-centered approaches.

The NAEYC position statement generally opposes what is known as the academic approach to early childhood education. The academic approach describes practices that are teacher-centered and instructivist in orientation. These practices are often used to assist children in mastering basic skills in literacy and numeracy. While NAEYC certainly does not oppose the development of numeracy and literacy skills per se, they do oppose methods that are generally recognized as academic. Activities such as rote counting,

isolating words and letters from context, and large-group, teacher-directed instruction all fall under the academic approach and would generally be considered inappropriate by NAEYC's position statement.

In opposition to an academic approach is the child-centered approach. As reviewed previously, child-centered approaches tend to focus on the child constructing his own learning by initiating activities that are of interest to him. If an activity is constructivist in nature, it allows the child freedom to engage with concrete materials while constantly building upon what the child already knows. In NAEYC's position statement, guidelines are outlined to clarify types of classroom activities that NAEYC deems appropriate in early childhood. Examples of such practices include children selecting centers from which they can engage in science, math, or writing activities, planning their own activities and learning centers, and participating in dramatic play.

Lilian Katz (1999) offers two possible reasons for the increasing pressure on kindergarten and preschool programs in the United States to use an academic approach. First, there is an “increasing demand and widening expectation that kindergarten and preschool programs ensure children’s readiness for the next grade or class level” (ibid., 1). Therefore, in the eyes of administrators and others responsible for curriculum, school readiness is best achieved through academic approaches. While there is some evidence that academic approaches can be successful, the majority of evidence shows that this benefit is only temporary (see Katz, 1999).

A second factor according to Katz (1999, 1) “may be that the traditional importance given to spontaneous play as young children’s natural way to learn may seem less urgent today than half a century ago when, for most children, opportunities and artifacts for play were less plentiful than today.”

A final possible consideration for the increase in inappropriate early childhood approaches is a question of economics. Teachers cost money. By increasing class sizes, schools can reduce the number of teachers therefore reducing expenditures in an oftentimes-stretched budget. High pupil numbers (over 18 with one teacher, over 25 with a teaching assistant) in early childhood classrooms is in and of itself a developmentally inappropriate policy according to NAEYC’s position statement (Bredekamp & Copple, 1997, 177). In addition,

it is possible that high pupil numbers encourage academic and inappropriate practices. In managing large numbers of young children, teachers could be more likely to use teacher-directed approaches such as whole-class quiet seatwork in order to maintain classroom control. Evaluating children based on pencil and paper work is much less time consuming than evaluating children based on documented observations and project work. Large class sizes hinder the teacher's ability to establish meaningful relationships with students, to evaluate students effectively, and to provide guidance and support to students engaged in meaningful project work. They do, however, save money.

2.6 Effects of Developmentally Appropriate Practice

Professionals who advocate for developmentally appropriate practices in the early childhood classroom do so based on the conviction that those practices are best for the child's overall development. A review of research documenting the effects that developmentally appropriate and inappropriate practices have on children follows.

2.6.1 Cognitive development

While research on the cognitive effects of didactic and child-centered approaches varies somewhat, it tends to support a child-centered approach toward instruction and learning overall. Stipek, Feiler, Daniels, and Milburn (1995) set out to document effects of appropriate and inappropriate practices on the cognitive development of children. Their first finding was that children in didactic, teacher-directed classrooms scored better on the letters/reading achievement test. No differences were found regarding knowledge of numbers.

Stipek et al. (1995) were surprised to find that children in teacher-centered classrooms did better than those in child-initiated classrooms on the test of letters/reading but not on numbers. They speculate that didactic methods could be more effective for some literacy skills such as letter recognition since it can be achieved through memorization. However, it may not be as effective for learning other literacy skills. Regarding math-related skills, researchers suggest that even basic math such as counting objects requires a conceptual understanding of one-to-one relationships that is not necessarily achieved through rote counting or paper-pencil activities that rely on symbols to represent numbers. Since both methods seem to produce positive results in one domain or another, it is important to

carefully consider the goals of the curriculum in order to best match the practice with the desired outcome.

A report by Sherman and Mueller (1996) discusses findings from an ongoing study of low-income children in St. Paul, Minnesota (USA). Though the results are preliminary, significant correlations exist between developmentally appropriate classroom practices and early student success in mathematics and reading. Hence, in contrast to Stipek's et al. (1995) findings, Sherman and Mueller found that both reading and mathematics scores were higher among children who were exposed to developmentally appropriate practices. This also provides support to Stipek's et al. (1995) claim that only some reading-related skills benefited from didactic classroom practices. The tests used to measure mathematics and reading skills in the two studies were undoubtedly different.

Sherman and Mueller (1996) also report that cultural differences did not affect the positive relationships between DAP in the classroom and mathematics and reading achievement. St. Paul has a growing population of recent immigrants from Southeast Asia (known as Hmong). An increasing number of Head Start participants come from this ethnic group. In the case of Sherman and Mueller's study, the children were split along lines of Hmong (46%) and non-Hmong. The finding that children from both Hmong and non-Hmong groups benefited from developmentally appropriate practices is highly encouraging when considering the value of developmentally appropriate practices across cultural and national borders.

Marcon (1992) showed that children who attended classrooms described as child-initiated demonstrated greater mastery of basic skills when compared to children who had attended academic-oriented and "in-between" model kindergartens. Children who attended the child-initiated classrooms also had more positive progress reports overall specifically in the areas of mathematics and science. Also, as shown in a study by Dunn et al. (see Dunn & Kontos, 1997, 11), children's receptive language was better in classrooms with "higher-quality literacy environments" and "developmentally appropriate activities." Frede and Barnett (1992) linked more school success in first grade to attending kindergarten classrooms that had moderate to high levels of High/Scope curriculum (considered developmentally appropriate) implementation.

Guild (2000) examined the relationships between early childhood education and primary school academic achievement in the Solomon Islands. In addition to finding an association between attending kindergarten and higher achievement in primary school, results indicate that children who experienced *higher quality* kindergarten education (including classrooms that had age-appropriate learning materials and teachers with early childhood education training) scored higher on both reading and mathematics examinations.

Some research has also examined creative thinking in children exposed to either didactic or child-centered curriculums and found that classrooms using a child-centered curriculum facilitated children's divergent thinking (see Dunn & Kontos, 1997, 10).

Marcon (2002) conducted research using a "quasi-experimental" design to track children from three different kindergarten models to both third and fourth grade. The three kindergarten models Marcon documented were child-initiated (CI), academically directed (AD), and a "middle-of-the-road" (M) model described by Marcon as being those classrooms where teachers worked to "blend notions of child development with their school system's competency-based curriculum" (ibid., 5). Marcon found that at the end of third grade, all children in the study, regardless of the kindergarten type attended, showed few differences in academic performance (ibid., 7). This, according to Marcon, is consistent with the developmental assumption that by the end of third grade most children will have learned the basic academic skills. However, by the end of fourth grade, children who had been in the child-initiated kindergarten classrooms were achieving higher academically than the model M children by 4% and 14% higher than the model AD children (ibid., 9). This difference between children from CI kindergarten models and AD kindergarten models is significant. It should be noted that Marcon's study did not account for other variables between kindergarten and fourth grade that undoubtedly had an affect on the children in the study.

How can this significant difference between academic achievement in the third and fourth grade be explained? Marcon (2002, 18-19) bases her explanation on children's motivation. In fourth grade, she explains, there is a shift from learning basic skills to using those skills to learn. Teachers also expect children to take more responsibility for their own learning and to show greater initiative. It is at this point in a child's education that dispositions toward school and learning become crucial for educational success. Students who have not

had the opportunity to initiate activities and think independently early in their school careers appear to be at a disadvantage later in school when these skills are essential.

Marcon's (2002) findings, however, do not come without criticisms. Lonigan (2003) raises a number of issues including methodology, statistical analysis, and interpretation of those statistics to which Marcon (2003) replies. One of the more significant criticisms Lonigan makes is in regard to Marcon's "gloss[ing] over" on the finding that children who attended model AD kindergartens were approximately half as likely to be retained in grade before third grade than children who had attended CI and M kindergartens. Marcon (2003, 2) replies with a restatement of three possible reasons for this:

- 1) greater continuity between the model AD kindergarten experience and educational practices in the primary grade, 2) family income influence on early grade retention, and 3) the competency-based system of promotion that emphasized basic reading and arithmetic skills regardless of performance in other subject areas.

She adds that further investigation was conducted on the second reason listed because of her earlier finding that "lower-income children were more likely than higher-income children to have been retained prior to third grade ($p = .01$)" (Marcon, 2003, 2). After analyses that took into account kindergarten type (Head Start, for which only low income families qualify, and "normal" kindergarten which does not receive federal funding) and the three models (AD, CI, and M), she concludes that "in the full sample, the notably lower retention rate of children who had attended AD kindergarten could be partially attributed to these children being less poor" (ibid., 2).

Taken together, a strong case for the use of child-centered, developmentally appropriate practices can be made. There are instances when it appears that a didactic approach can prove beneficial. However, curriculum objectives always need to be taken into account. If the development of process skills, attainment of basic facts, and dispositions toward learning are the aims of the curriculum, then appropriate practices will be primarily child-centered.

2.6.2 Social-emotional development

Research on the social-emotional development of children has focused particular attention on stress in children. Part of this focus is the result of Elkind's (1981) warning of the excess stress children experience at a young age. A brief discussion of Elkind, Piaget, and

research about stress in children is followed by a review of literature regarding stress behaviors exhibited by children in developmentally appropriate and inappropriate classrooms.

2.6.2.1 Hurried children and stress

In Elkind's book, *The Hurried Child* (1981), he warns about the hurrying of young children. Children are exposed to hurrying when adults view the child as a “miniature adult.” Because they view the child as a person who is small but capable of understanding the world as adults do, they tend to place unrealistic physical, cognitive, and emotional expectations on children too soon. Piaget, throughout his work, describes childhood as a time qualitatively different from that of adulthood (see McNally, 1973). Before reaching abstract levels of adult thinking, the child, according to Piaget, must progress through a number of developmental stages in early and middle childhood.

It is these stages and the time required to progress through them that often concern educators. When academically oriented curriculum is pushed into lower grades at school, the assumption is that children are capable of speeding up or even skipping certain developmental stages. After all, the teacher is there to “teach” children. In a 1967 lecture in New York, Piaget responded to what he called “the American question,” which is, “If there are stages that children reach at given norms of ages can we accelerate the stages?” Piaget responds:

...surely, the answer is yes...but how far can we speed them up?...I have a hypothesis which I am so far incapable of proving: probably the organization of operations has an optimal time...For example, we know that it takes 9 to 12 months before babies develop the notion that an object is still there even when a screen is placed in front of it. Now kittens go through the same substages but they do it in three months – so they’re six months ahead of the babies. Is this an advantage or isn’t it?

We can certainly see our answer in one sense. The kitten is not going to go much further. The child has taken longer, but he is capable of going further so it seems to me that the nine months were not for nothing...It is probably possible to accelerate, but maximal acceleration is not desirable. There seems to be an optimal time. What

this optimal time is will surely depend upon each individual and on the subject matter (see Elkind, 1970, 24).

The questions of how fast, how much, and how soon are at the center of the debate over academically-oriented versus play-oriented curriculum. While there are cognitive and social consequences for the answers to these questions, Elkind focuses his attention on the social realm.

Hurrying, Elkind warns, stresses children (1981). Stress, as Elkind defines it, is "any unusual demand for adaptation that forces us to call upon our energy reserves over and above that which we ordinarily expend and replenish in the course of a twenty-four hour period" (1981, 166). According to McCracken and Swick (see Burts et al., 1992, 300), stressors "potentiate" each other so that the effects of stressors, when combined, are more harmful than when considered alone. We know from Elkind that children experience stress in a variety of situations both in and outside the home. Because of the "potentiating" effect of stressors, Rutter (see Burts et al., 1992, 300) recommends stressors should be eliminated whenever possible. One of these places is the classroom. Rutter (see Burts et al., 1992, 301) suggests that positive school experiences can lessen the effects of outside stressors. Assuming developmentally appropriate classrooms could provide the positive experiences Rutter spoke of, Burts, Hart, Charlesworth, and Kirk (1990) set out to document children's stress behaviors in developmentally appropriate and developmentally inappropriate classrooms.

In Burts' et al. (1990) initial study of 37 preschoolers (5- and 6-year-olds; 20 in a more developmentally appropriate classroom and 17 in a more developmentally inappropriate classroom), they found that children in the more developmentally inappropriate classroom exhibited "significantly more" stress behaviors than children in the more developmentally appropriate classroom. Additionally, "marginal" gender differences were revealed. Boys showed more total stress behaviors than girls. One somewhat surprising result was that children in the more developmentally appropriate classroom showed more stress during center time and transition time than children in the more developmentally inappropriate classroom. The authors provide possible explanations for this based on the length of center time (40 minutes in the more appropriate classroom and 20 minutes in the more inappropriate classroom) and on existing literature about peer entry styles.

Regarding length of center time, the authors hypothesize that 40 minutes may have been too long for children to stay on task without teacher guidance (the teacher was busy testing individual students). They note that classroom observers only documented stress behaviors during the last 10 to 15 minutes of center time. In the more developmentally inappropriate classroom only four to five children were permitted in centers at a time and the length of center time was comparably less at 20 minutes. Perhaps the activity did not have time to deteriorate and stress behaviors to appear.

Burts et al. (1990) also cite peer group entry literature (Dodge, Schlundt, Shocken, and Delugach, 1983; Putallaz & Wasserman, 1989) as a possible explanation to higher recorded stress behaviors during center time. According to this literature, children use various techniques when entering peer groups. These techniques include waiting, hovering, and disagreeing, which are similar to behaviors included on the instrument used by the observers to document stress behaviors. Since children in the more developmentally appropriate classroom were allowed to move freely between centers, Burts et al. (1990) speculate that it is possible that some of the children's documented stress behaviors were in fact behaviors exhibited because of peer group entry.

Burts et al. (1992) set out to bolster the findings of the initial 1990 study as well as to examine the factors of sex, race, and socioeconomic status (SES). In this study, Burts et al. (1992) observed 204 preschool children (5- and 6-year-olds; 103 in appropriate classrooms and 101 in inappropriate classrooms¹) and found once again that children in developmentally inappropriate classrooms displayed "significantly more" overall stress behaviors than children in developmentally appropriate classrooms. More specifically, they found that boys in inappropriate programs showed more stress than boys in appropriate programs. This is consistent with the literature stating that boys experience stressors differently than girls (see Burts et al., 1992, 311). Regarding race and SES, Burts et al. (1992, 313) found that "low SES black children exhibited more total stress behaviors than low SES white children, regardless of classroom type." However, when SES was high among black and white children, race and gender differences were not found among

¹ In the 1990 study, the authors described programs as *more* appropriate or *more* inappropriate whereas in the 1992 study they refer to programs as simply appropriate or inappropriate. NAEYC does state that programs do not need to be in 100% compliance with guidelines to be certified appropriate. A "more appropriate than inappropriate", or vice versa, system exists.

children who attended developmentally appropriate classrooms (ibid., 313). Appropriate practices can benefit children from different racial groups but primarily, it seems, when children are from higher SES families.

Again, regarding race, black children in inappropriate classrooms showed more signs of stress than white children in inappropriate classrooms during whole group, waiting, and group transitions, while white children in inappropriate classrooms showed more stress than black children in inappropriate classrooms during group story time (Burts et al., 1992, 313). While race differences in appropriate classrooms exist when SES is low, race differences in inappropriate classrooms appear evident regardless of SES.

Burts et al. (1992, 301) also discuss work by Bentley and Wilson. Their study found that children in developmentally inappropriate half-day programs were more stressed than children in inappropriate whole-day programs and developmentally appropriate half-day and whole-day programs. The findings of the half-day inappropriate classroom children compared with the appropriate classroom children are expected. The findings of the half-day inappropriate classroom children compared to the whole-day inappropriate classroom children are somewhat unexpected. Bentley and Wilson speculate that children in the half-day program were more stressed because they were expected to learn the same amount of academically oriented curriculum in half the time as the whole day children.

Stress seems to appear more frequently in developmentally inappropriate classrooms. If Rutter's advice to eliminate stress from children's lives wherever possible were to be heeded, it would be wise to use more developmentally appropriate practices. These practices, in addition to being cognitively beneficial to students, have the potential to strengthen children's resistance to stress occurring outside of the classroom.

2.6.2.2 Motivation and dispositions toward learning

Motivation and dispositions toward learning are important features of NAEYC's position statement. Skills without the motivation to use those skills are of little use. Hyson, Hirsh-Pasek, and Rescorla (1990, see Dunn & Kontos, 1997, 10) found that children in appropriate classrooms had attitudes that were more positive toward school. Stipek et al. (1995) documented effects of appropriate and inappropriate practices on kindergarten and preschool aged children's motivation. They found that children in child-centered programs

had higher expectations for school success, chose a more challenging math problem to solve, showed less dependency on adults for permission and approval, were prouder of their accomplishments, and worried less about school. Also, children in child-initiated classrooms describe their intellectual competence more positively than children in didactic classrooms (see Dunn & Kontos, 1997, 11; Stipek et al., 1995, 220). These findings support a 1993 study by Stipek (see Stipek et al., 1995, 220), which found that children in didactic classrooms have lower confidence in their abilities and higher school-related anxiety.

Smith and Croom (2001) studied the relationship between teachers' reported beliefs about developmentally appropriate practices and children's self-concepts. First, they found that teachers' beliefs did not predict any part of self-concept in girls. More inappropriate beliefs, however, did predict an academic self-concept in boys. Less rigid correlation analyses were also conducted. These analyses showed first, that as teachers' appropriate beliefs increased, girls' physical ability self-concepts decreased. Results for the boys presented a paradox. Both appropriate and inappropriate beliefs were correlated positively with academic self-concept. Additionally, inappropriate beliefs were correlated with subscales of the academic self-concept dimension including Reading, Mathematics, and General School Self-Concept scales. Appropriate beliefs were correlated with the Mathematics and General School Self-Concept scales. The results of this study seem mixed and perhaps provide weight to what Bredekamp and Copple (1997) describe as "both/and" thinking, i.e. teachers use a combination of practices considered both appropriate and in appropriate. While it seems logical that students who attend more inappropriate classrooms² characterized by didactic approaches would maintain more academic self-concepts, it appears that children in more appropriate classrooms also maintain academic images of themselves. This seems to provide evidence that academic skills are important features of child-centered education despite critics' suggestions that they are not.

The very title "child-initiated" implies increased motivation on the child's part toward learning. NAEYC's position statement calls on teachers to "encourage [students] to choose and plan their own learning activities" (Bredekamp & Copple, 1997, 19). Using

² This study measured self-conceptions in relation to teacher beliefs, not classroom practice. However, as evidenced by Charlesworth, et.al. (1993), beliefs are positively correlated with practices, especially inappropriate beliefs and practices.

appropriate practices that allow children to make decisions can support children's motivation in the classroom and positive dispositions toward learning. Children's motivation and dispositions toward learning are vital if children are to become lifelong learners.

2.6.3 Summary

When teachers consider what methods to use within their classrooms, cognitive as well as social-emotional consequences need to be considered. The cognitive benefits of developmentally appropriate practices seem to outweigh the cognitive benefits of developmentally inappropriate practices. Only one of the studies reviewed here (Stipek et al., 1995) revealed an advantage of a didactic classroom over a child-centered classroom. The children in Stipek's et al. (1995) study who were in a teacher-directed classroom scored better on the letters/reading achievement test than those in the child-initiated classroom. This is likely due to the skills on which the students were being tested, in this case letter recognition, which can be achieved through the didactic practice of memorization. When cognitive development was tested with regard to concepts such as mathematical concepts and literacy concepts, students in child-initiated classrooms often fared better. At times results were equal.

If research results regarding cognitive development in developmentally appropriate and inappropriate classrooms are taken alone, they suggest that child-initiated practices found in appropriate classrooms yield stronger results. When combined with the social-emotional consequences of didactic practices, the argument for child-initiated, developmentally appropriate practice becomes increasingly robust.

In the studies reviewed here, children in developmentally inappropriate classrooms exhibited more stress behaviors than children in developmentally appropriate classrooms. Additionally, students in developmentally appropriate programs had generally more positive experiences at school. These social-emotional outcomes of developmentally appropriate programs, coupled with the cognitive outcomes, provide a solid foundation on which teachers can base informed decisions about classroom practice.

2.7 Developmental Appropriateness

In NAEYC's original position statement (1987), it defined "developmental appropriateness" as having the dimensions of age appropriateness and individual appropriateness. Regarding age appropriateness NAEYC adheres to human development research that indicates there are universal and predictable patterns of growth and change that occur in the first nine years of life and that these changes occur in all four domains of development³: physical, emotional, social, and cognitive (Bredekamp, 1987, 2).

Regarding individual appropriateness, NAEYC believes that each child is unique and possesses an individual pattern of growth, as well as an individual personality, learning style, and family background. Therefore, teachers' and other adults' interactions with children should be responsive to these individual differences (Bredekamp, 1987, 2).

Since NAEYC's original position statement, however, they have added one additional dimension of developmental appropriateness, that being social and cultural appropriateness. This dimension of developmental appropriateness calls on teachers and other early childhood care providers to be aware of the cultural and social contexts in which children live and to provide "learning experiences [that] are meaningful, relevant, and respectful for the participating children and their families" (Bredekamp & Copple, 1997, 9). It could be said that social and cultural appropriateness were included under individual appropriateness in the original statement. After all, it did acknowledge the individual child's family background. However, by 1997, when the most recent position statement was published, there had been an increase in awareness of the cultural contexts in which children live. Especially within the United States, where NAEYC's position has its origin, both urban and rural populations had likely increased in cultural diversity. With this being the case, NAEYC decided, perhaps, to expand its definition or simply to place more emphasis on social and cultural contexts.

2.7.1 Age appropriate guidelines

NAEYC specifically outlines practices that it deems age appropriate and inappropriate for children in the primary grades (ages 6 through 8) in its 1997 publication (Bredekamp & Copple, 1997, 144-158). The overarching guidelines can be summarized as follows. First,

³ The 1997 edition added two more domains (*linguistic* and *aesthetic*) for a total of six.

regarding integrated development and learning, the development of young children cannot be divided neatly into segments. Therefore, teachers of young children must always be aware of “the whole child” (ibid., 144). Also, because primary grade children’s learning is integrated, so too should be their curriculum (ibid., 144).

Second, regarding physical development, because physical activity is vital for children’s physical and cognitive growth, children need to be engaged in active, rather than passive activities (Bredekamp & Copple, 1997, 156).

Third, regarding cognitive development, though children at this age have developed the ability to use symbols such as language and numbers, they still need concrete reference points. Therefore, a curriculum should provide “concrete materials and experience for children to investigate and think about and opportunities for interaction and communication with other children and adults” (Bredekamp & Copple, 1997, 156). The content also needs to be “relevant, engaging, and meaningful to the children themselves” (ibid., 156). In addition, children at this age gain new skills such as being able to take another’s point of view and can engage in interactive conversations (ibid., 152). Therefore, primary-age children should be provided opportunities to work in small groups on projects that “provide rich content for conversation” and teachers should “facilitate discussion among children by making comments and soliciting children’s opinions and ideas” (ibid., 157).

Fourth, regarding social-emotional and moral development, research shows that children who fail to develop minimal social competence and are rejected by their peers are at increased risk to drop out of school, to become delinquent, and to experience mental health problems in adulthood (Bredekamp & Copple, 1997, 155). Again, to combat this, teachers need to provide cooperative small group projects that not only develop cognitive abilities but also promote peer interaction (ibid., 157). In addition, children need to develop a sense of competence by learning the skills and knowledge recognized by their culture as important (e.g. reading, writing, and calculating numerically in many Western cultures) (Bredekamp, 1987, 65). Perhaps more important, children need to develop dispositions to use their skills. They need to develop a desire to read as well as to apply their newly acquired math skills (Bredekamp & Copple, 1997, 158). Finally, teachers need to help children accept their conscience and achieve self-control. They can do this by modeling

appropriate behavior, providing logical consequences, and providing opportunities for children to assume responsibility while knowing that primary age children cannot be expected to display adult levels of self-control (Bredekamp, 1987, 65; Bredekamp & Copple, 1997, 158).

2.7.2 Individually appropriate guidelines

The second dimension to developmentally appropriate practice is that of individual appropriateness. NAEYC's guidelines regarding individual appropriateness are broader than its guidelines concerning age appropriateness. They are summarized here. First, children's "backgrounds, experiences, socialization, and learning styles are so different [that] any one method is likely to succeed with some children and fail with others." Therefore, the "younger the children and the more diverse their backgrounds, the wider the variety of teaching methods and materials required" (Bredekamp & Copple, 1997, 159). Second, schools using too much competition and comparison among students "hasten the process of children's own social comparison, lessen children's optimism about their own abilities and school in general, and stifle motivation to learn" (Bredekamp, 1987, 66).

In his 1992 article, Aldridge expands on what it means to be individually appropriate in the context of NAEYC's 1987 position statement. According to Aldridge, there are issues regarding individual differences that need to be addressed in order to more fully understand and assist the variety of children within any classroom. These issues exist within personality development, cognitive and language development, physical development, and ecological development (development that takes place in accordance with a child's surroundings). A discussion of his entire article would be unnecessary and at times redundant of NAEYC's statement. Relevant issues follow.

2.7.2.1 Regarding personality development

When considering the child's personality development, his personality type, psychosocial development, and self-esteem must be taken into consideration. There are four dimensions to personality type (see Aldridge, 1992, 1). They are presented as dichotomies but in fact allow for a variety of dispositions along a continuum. The first is introversion versus extroversion. Children who are more introverted tend to be shy and enjoy their own internal world. Extroverts, on the other hand, tend to be more social and outgoing. Second is intuition versus sensing. The sensing child takes in information through his senses. An

intuitive child is aware, for example, of what others think of him. While it is often the senses that receive attention at school, intuition also needs to be recognized. Thinking versus feeling is the third dimension of personality type. In Aldridge's (1992, 2) words, "...some children make choices from the head while others make choices from the heart." Perceiving versus judging is the final dimension of personality type. A perceiving child prefers less structure and is more open to changes, while a judging child prefers more structure and planning.

The key to individually appropriate practice regarding personality type is that teachers "accept, value, and help the child experience the world within the context of his/her own typology" (see Aldridge, 1992, 2). Teachers can best provide this assistance if they are aware of their own typology so that they do not impose their personality type on their students.

Psychosocial development is concerned with Erikson's theory of psychosocial dilemmas (see Aldridge, 1992). Within the early childhood years of six to eight children are primarily concerned with the dilemma of industry versus inferiority. Industry is the child's ability to exhibit competence within a variety of new, often school-based, situations. It is accompanied by the child's attitude that "I can do it." Inferiority, on the other hand, is the child's inability to exhibit competence and is accompanied by an attitude of "I can't." Classroom practices that require the child's initiative and decision-making help support the individual's sense of industry. Practices such as long periods of sitting and listening, using worksheets and drill extensively, and emphasizing testing inhibit the child's sense of industry (see Aldridge, 1992, 3).

Self-esteem is, essentially, how the child feels about himself. While NAEYC certainly does discuss self-esteem, Aldridge offers a more comprehensive discussion. In order to support healthy self-esteem development in the classroom, teachers can heed several points of advice offered by Aldridge (1989, see Aldridge, 1992). Aldridge's first piece of advice is to accept children as they are. This may seem obvious, but there is evidence that schools and teachers do not do this. One example from Kamii (see Aldridge, 1992) is that of child-become-test-taker. In the effort to perform above national norms on standardized tests, the teacher may push the child to become a good test taker in order to make the teacher look good. Being a good test taker has no real relevance in a child's life. Also, accepting

children as they are may help to offset the harm that some children experience when they are subjected to parents who wish to live their own lives through their child's. Secondly, teachers should avoid comparative and competitive practices. NAEYC does discuss this in its statement of individually appropriate practice. Aldridge reiterates NAEYC's position stating that the only person a child should ever be compared to is himself. Third, teachers should seek out the individuality in each child. By doing this, teachers can help thwart the negative affects of comparison that a child may experience early in life. Fourth, classroom practices need to be examined for practices that are individually inappropriate. By making practices individually appropriate, teachers can better support the individual's development of self-esteem.

2.7.2.2 Regarding cognitive development

An understanding of cognitive development is needed when considering individual appropriateness. One theory addressing both the individual and cognitive development is Howard Gardner's theory of multiple intelligences (1983). His theory is based on the idea that people can be "intelligent" in many different ways. Gardner offers seven "ways" of being intelligent including linguistically, musically, logical-mathematically, spatially, bodily-kinesthetically, interpersonally, and intrapersonally.

The relevant principle of practice here is that teachers should provide a variety of activities that call on these different intelligences so that the child can discover what she likes and at what she excels. Additionally, children's art and writing/spelling go through a developmental sequence (see Aldridge, 1992, 4). Teachers should be aware of these sequences so that they know approximately where the child is in development and can design activities around the individual's developmental stage.

2.7.2.3 Regarding physical development

Aldridge's comments regarding individual physical development state, quite simply, that individuals have various levels of fine and gross motor skills. He pays particular consideration to those individuals with exceptional physical development such as the disabled. In such a case, special accommodation is needed in order include the child in the classroom. The level of inclusion will be based on the severity of physical disability (Aldridge, 1992, 4).

2.7.2.4 Regarding the school environment

Traditional school environments potentially pose an obstacle for implementing developmentally appropriate practices. Elkind warns that while many educators have embraced the notion of developmentally appropriate practice, it has little chance of being genuinely implemented (see Aldridge, 1992, 5). The cause of this lies in the majority of schools having a working philosophy that requires sequential skills acquisition and achievement test assessment and “accountability.” This type of underlying philosophy is clearly not geared toward individually appropriate practices.

2.7.3 Culturally appropriate guidelines

The third dimension to developmental appropriateness is that of cultural appropriateness. Added in the 1997 revision (Bredekamp & Copple, 1997), this dimension calls on teachers to be aware of the family and cultural contexts in which children develop. Children experience easier transitions from home life to school life when the skills, abilities, and understandings constructed at home are in line with expectations of the school and individual classroom. Teachers need to know the families of all children in the classroom and may need to make special effort to understand those families that are culturally different from their own culture. Children can only be known and understood fully when parents are understood and treated as integral partners in their child’s education. When children sense that teachers respect their families, it builds their sense of self-esteem and competence (Bredekamp & Copple, 1997,159).

2.8 Developmentally Appropriate and Inappropriate Practice

NAEYC also provides guidelines for developmentally appropriate practice in the domains of curriculum, creation of community and social support, teaching strategies, family-school relationships, and assessment (Bredekamp & Copple, 1997). The questionnaire that was given to teachers in this study is one that was originally written to test for beliefs about these domains of early childhood education. It also asks teachers to report classroom practices in order to check for congruency between reported practices and beliefs. A further discussion of the questionnaire will take place later (section 6.2). First, a description of what NAEYC’s position statement declares developmentally appropriate is needed.

2.8.1 Curriculum

As stated earlier, a developmentally appropriate curriculum is an integrated curriculum. Integration across traditional subject disciplines is a key component of NAEYC's curriculum position because it considers a child's learning and development to also be integrated. While NAEYC is committed to integration, it recognizes that there are times when it is appropriate to focus on one subject area so that in-depth study can take place. Artificial structuring of time and place in order to "cover" the curriculum is inappropriate. Balance between integration and focusing on one subject is appropriate (Bredekamp & Copple, 1997, 20).

The curriculum also needs to provide for all developmental areas of the child including physical, emotional, social, linguistic, aesthetic, and cognitive. Because of this, the curriculum is broad in scope and includes activities in mathematics, the sciences, language and literacy, social studies, music, art, dance, drama, physical education, health and safety, and the outdoors. The curriculum is always relevant to children's lives and intellectually engaging. Opportunities are made to include children's unique family backgrounds and culture into the curriculum while supporting their home language if it is different from the language of school instruction. The curriculum is structured in a way that builds on information and skills that the individual child already has. While the acquisition of knowledge and skills is important, positive dispositions toward those skills and knowledge are emphasized so that children want to use their new skills and know when to use them. The curriculum sets goals that are challenging yet attainable for most of the children. When goals appropriate for the age range are unattainable for specific individuals, individually appropriate goals are set. For example, most children will be able to read by the end of first grade. However, some will need continued support through second grade and even later in order to "break the code." Technology, when used, needs to be "physically and philosophically" integrated into the classroom and curriculum (Bredekamp & Copple, 1997, 20-21).

2.8.2 Creation of community and social support

The community that NAEYC speaks of is one in which children, adults, and families are all valued and respected. Knowing each child well allows the teacher to support the child socially and academically (Bredekamp & Copple, 1997, 16-17).

Teachers provide opportunities within their classrooms to build a sense of cohesiveness. This is done through the use of whole group meetings and small group project work. Groups are flexible and often heterogeneous according to ability and gender. Groups can also be formed to allow children with specific interests or skills to work together. When teachers notice a child who is having trouble interacting with peers, they intervene offering assistance to both the child and to the child's peers (Bredekamp & Copple, 1997, 16-17).

The teacher sees herself as facilitating children's social development. Teachers work with other teachers in the school as well as with administrators to create an atmosphere of togetherness throughout the school building. School-wide goals include promoting ethical behaviors such as trustworthiness, respect, responsibility, caring, fairness, and citizenship. These characteristics are also encouraged in the classroom by teachers setting clear, consistent and fair limits for children's behavior. Democratic processes are introduced and used when appropriate. For example, children and the teacher can work together to develop classroom rules or gain group consensus (Bredekamp & Copple, 1997, 16-17).

2.8.3 Assessment

Just as curriculum integrates different subject matter, appropriate assessment is integrated with curriculum. By integrating assessment with appropriate curriculum, assessment becomes authentic and relevant to the child's development and learning (Bredekamp & Copple, 1997, 21).

Appropriate and comprehensive assessment relies heavily on documented teacher observations, collections of representative student work, input from parents, and children's own perceptions of their strengths and weaknesses. One of the main purposes of assessment is to document children's progress along a continuum of learning. Assessment is also used to guide curriculum so that the curriculum matches the students' current level of development and learning. Assessment should not be used to check a child's progress against national averages (Bredekamp & Copple, 1997, 21).

Assessment needs to be ongoing, strategic, and purposeful. Because young children's development is uneven and sporadic, an accurate and comprehensive picture of a child's level of development is difficult to obtain. If assessment is ongoing, however, it provides an opportunity to capture moments of rapid progress as well as periods of slower progress.

Both of these periods are important to the overall assessment of the child. Teachers also need to have an assessment strategy that gives them a clear structure about how and when to document student progress (Bredekamp & Copple, 1997, 21).

2.8.4 Family and school relationship

The foundation for positive and effective relationships between schools and families lies in mutual respect, cooperation, and shared responsibility. Parents have a right to voice concerns about their child and his education. This, however, does not mean that teachers relinquish educational responsibility to parents. Teachers are professionals with training in child development and therefore need to combine their knowledge with parents' wishes while keeping the child's well-being as the focus (Bredekamp & Copple, 1997, 22).

Communication between parents and the teacher needs to take place regularly as well as at scheduled conference times. Regular communication gives both the teacher and parent(s) ample opportunity to express concerns, successes, and other notable information about the child. In addition to parents and teachers, information sharing needs to take place with other groups or people, such as social services or health agencies, that share educational responsibility for the child. Continuity of information ensures informed decisions by those working with the child (Bredekamp & Copple, 1997, 22).

2.8.5 Teaching strategies

Children actively construct their knowledge and understanding of the world and therefore benefit from initiating, planning, and performing their own activities. At the same time, adults are responsible for children's healthy development and learning. The key to appropriate teaching is finding an "optimal balance" between children's self-initiated learning and adult guidance (Bredekamp & Copple, 1997, 17-19).

Teachers present a wide a range of experiences that extend a child's interest and thought. Through these varied experiences teachers pose problems, ask questions, and make comments that stimulate children's learning. To sustain children's engagement in meaningful activities, teachers use strategies such as modeling, demonstrating specific skills, giving information, and using verbal encouragement. When children "get stuck," teachers provide cues and other forms of scaffolding that enable children to successfully complete tasks just beyond their own abilities. Teachers work to provide activities that are

challenging yet allow children to be successful. Throughout extended and in-depth activities, teachers help children reflect on their learning experiences in order to enhance their conceptual understanding (Bredekamp & Copple, 1997, 17-19).

2.9 Criticisms and Misconceptions about DAP

There has been and continues to be much debate and sometimes criticism regarding developmentally appropriate practices since the original, 1987 position statement. Indeed, one of NAEYC's goals is to "encourage the kind of questioning and debate among early childhood professionals that are necessary for the continued growth of professional knowledge in the field" (Bredekamp & Copple, 1997, 4). While NAEYC welcomes criticism and debate, they feel that some criticisms stem from misconceptions about their position. These misconceptions lead to unproductive argument. With the publishing of a revised position in 1997, NAEYC hopes to more clearly state its position thus ending unproductive debate (Bredekamp & Copple, 1997, 4). In order to better understand what developmentally appropriate practice is, it can be helpful to know what it is not.

2.9.1 An "alternative view"

In 1991 Fowell and Lawton of the University of Wisconsin (USA) put forth an "alternative view" of appropriate practice in early childhood education. Beginning in the 1970's, Lawton has developed a classroom model that has been named the "Ausubelian" model, after David Ausubel. While the model is based primarily on Ausubel's theories, Jean Piaget's and Jerome Bruner's theories are also intertwined within the model (see Fowell & Lawton, 1991, 57). A discussion of the Ausubelian model's theoretical background is beyond the scope of this report. However, the classroom practices that it supports and the suggestion by Lawton and Fowell that these practices lie in opposition to NAEYC's position do warrant attention here⁴.

Lawton's Ausubelian model of appropriate practice calls for what he describes as "advance organizer" lessons. These lessons, approximately a half hour in length and presented in small groups of four to five children, occur as part of a four-hour kindergarten day. Each half hour session is divided into a 10-15 minute teacher presentation and a 15-20 minute

⁴ Lawton's model has been used with 3- and 4-year-old children. This study concerns first grade children, generally 6- and 7-year olds. While there is an age difference between the two groups, the underlying principles of what is appropriate practice according to NAEYC remain the same.

session consisting of related activities that are concrete and manipulative in nature. Each child takes part in two advance organizer sessions within a four-day week. The content of these advance organizer lessons consists of subject matter such as social studies, math, science, etc. and is then organized hierarchically within each content area. For example, a social studies unit could start with physical needs, then move to emotions, and finally move to social concepts of family and community (Fowell & Lawton, 1991, 61-62).

According to Lawton and Fowell, these advance organizer lessons are inappropriate under NAEYC guidelines for appropriate practices. They cite NAEYC's 1987 list of appropriate and inappropriate practices for 4-and 5-year-olds. In doing so, however, they have managed to eliminate key phrasing in NAEYC's list of inappropriate practices. These eliminations distort NAEYC's true position, thus providing Lawton and Fowell the basis for their position.

For example, in NAEYC's original position, under "inappropriate" practices, it states, "Teachers use highly structured, teacher-directed lessons *almost exclusively*," (Italics added; Bredekamp, 1987, 54). Fowell and Lawton translate this as, "Teachers use highly structured, teacher-directed advance organizer lessons *at small group time*," (Italics added; 1991, 67). Clearly there has been a distortion of the actual NAEYC position. NAEYC does not oppose occasional teacher-directed instruction per se. Fowell and Lawton report that children take part in two half hour sessions in a four-day week (1991, 62). Surely, NAEYC would not see this as "almost exclusively." Again, Fowell and Lawton misinterpret NAEYC's statement, "Children are expected to sit down, watch, be quiet, and listen, or do paper-and-pencil tasks for *inappropriately long periods of time*," (Italics added; Bredekamp, 1987, 54) with "Children are expected to sit down, attend, listen, and participate during *small group times*," (Italics added; Fowell & Lawton, 1991, 67). Out of the six practices that Fowell and Lawton describe as inappropriate under NAEYC guidelines but appropriate under their "alternative view," five of them are misinterpretations by Lawton and Fowell and would, in reality, be considered appropriate by NAEYC. One practice cited by Lawton and Fowell as being appropriate in their view but inappropriate in NAEYC's view is, "Instruction occurs in content areas such as math, science, social studies, and information-processing skills. Times are set aside for small group instruction in these areas," (1991, 68). This corresponds more directly to NAEYC's statement of inappropriate activities that, "Children's cognitive development is seen as

fragmented in content areas such as math, science, or social studies, and times are set aside to concentrate on each area,⁵" (Bredekamp, 1987, 56). While, after all of this misinterpretation and misunderstanding, there may in fact be a single point that NAEYC and Lawton/Fowell genuinely disagree on, it is not enough to validate Lawton and Fowell's argument that their view is in opposition to that of NAEYC's. It is stated under NAEYC's criteria for program accreditation that programs do not have to comply with 100% of the criteria but instead should be able to demonstrate "substantial" compliance (Information for Programs). Lawton's Ausubelian model is appropriate under NAEYC guidelines for appropriate practice and any suggestion otherwise is a result of distortion or is simply a misunderstanding of NAEYC's original position statement.

2.9.2 Five myths about DAP

In addition to Lawton and Fowell's (1991) alternative view toward developmentally appropriate practice, Kostelink, Soderman, and Whiren (2004) offer five myths about developmentally appropriate practice.

2.9.2.1 Only one way to implement

The first myth misunderstands DAP as having only one right way to implement it. This assumption, according to Kostelink et al. (2004), is based on the idea that one teaching method is best for all children in all situations. They go on to state that "teaching is complex" and that what is optimal for one group of students may not be for another group (ibid., 34). "Educators' search," according to Kostelink et al. (2004, 34) "is not simply for 'right' answers but for the best answers to meet the needs of children representing a wide range of abilities, learning styles, interests, and social and cultural backgrounds."

NAEYC, in its revised position statement, calls for "both/and" thinking instead of "either/or" thinking (Bredekamp & Copple, 1997, 23). By this they mean that practitioners should recognize balance in teaching practices. "It is not that children need food or water; they need both" (1997, 23). An example that the authors cite is the heated debate over whole-language or phonics instruction. While both positions have their ardent advocates, NAEYC sees the two approaches as "quite compatible and most effective in combination"

⁵ NAEYC's revision concedes, "focusing on one subject is also a valid strategy at times" (Bredekamp & Copple, 1997, 20).

(Bredekamp & Copple, 1997, 23). To be sure, there are some practices such as physical punishment, verbal abuse, and discrimination against children and their families that NAEYC stands in firm opposition to. However, a balanced approach is the essence of DAP.

2.9.2.2 All you need are the right materials

The second myth sees the root of DAP in the materials that are used. While appropriate materials “enrich the educational environment” Kostelink et al. (2004, 35) state that research shows “that the teacher is the essential ingredient in determining the quality of education received by children.” Appropriate equipment is only beneficial when accompanied by qualified staff who know how to use the equipment in order to enhance learning and development (Kostelink, 2004).

2.9.2.3 Unstructured and chaotic

The third myth Kostelink et al. (2004) offer is that developmentally appropriate programs are unstructured and chaotic. Defining structure is at issue here. “Structure refers to the extent to which teachers develop an instructional plan and then organize the physical setting and social environment to support the achievement of educational goals” (see Kostelink et al., 2004). By this definition, developmentally appropriate programs are structured. This type of structure, however, is different from traditional ideas of structure, i.e. desks in rows and columns, children working quietly on seat work, etc. NAEYC’s position statement makes clear its position on classroom structure. “Children experience an organized environment and an orderly routine that provides an overall structure in which learning takes place; the environment is dynamic and changing but predictable and comprehensible from a child’s point of view” (Bredekamp & Copple, 1997, 10). Developmentally appropriate classrooms are not a free-for-all; they are not chaotic. “Children are on task constructively involved in their learning” (Kostelink et al., 2004, 35).

2.9.2.4 Teachers are not teaching

The myth that teachers do not teach in developmentally appropriate classrooms stems from the idea that a teacher is someone who directs the entire class from the front of the room at all times. While whole-group instruction does occur at times in developmentally appropriate classrooms, “teachers spend much of their classroom time moving throughout the room and working with children individually and in small, informal groups” (Kostelink

et al., 2004, 36). This is the time, according to Kostelink et al. during which teachers directly and indirectly influence children's learning. Suggestions are made, questions are asked, challenges are presented, and information is provided. All of these activities are teaching behaviors.

2.9.2.5 No academics

The fifth myth is that academics do not exist in developmentally appropriate programs. The misconception here is that "academics" refers directly to "academic approaches" which should not be the case. As was discussed earlier, programs that are heavily based in academic approaches, e.g. rote and abstract instruction and paper-pencil activities, could not be considered developmentally appropriate. However, teaching academics such as value and number concepts is absolutely appropriate by NAEYC standards. Kostelink et al. (2004, 36) state, "Children do not wait for elementary school to demonstrate an interest in words and numbers." It is the teacher's role to present academic concepts and processes in appropriate and meaningful situations. Actively manipulating concrete materials provides the foundation for academics (Kostelink et al., 2004, 36).

3 RESEARCH ON TEACHER BELIEFS AND PRACTICES

Do early childhood teachers believe in developmentally appropriate practice? Do their beliefs vary across grade levels? Do teacher beliefs translate into congruent classroom practices? Are there factors that predict beliefs in either developmentally appropriate or inappropriate practice? All of these questions have been asked and studied to one extent or another. A review of this research will provide a context within which to examine the results of the current study.

3.1 Beliefs, Practices, and their Relationship

Hatch and Freeman (1988) studied preschool teachers' beliefs in the state of Ohio (USA). Their findings indicated that 66.7% of teachers had belief orientations in line with "maturationism," an orientation stressing the role of "genetically controlled biological change," or "interactionism," an orientation based on the "dynamic interaction of the individual with his or her environment." Both of these orientations are in opposition to "behaviorism" which stresses environmental factors and the direct transmission of information. The programs teachers were working in, however, were "clearly behaviorist in orientation" (ibid., 159). This is primarily because of Ohio's state requirements regarding educational outcomes. This disparity between beliefs and practices represents a philosophy/reality conflict. These types of conflicts will be addressed later in this report.

A 1993 study by Charlesworth et al. documented kindergarten teachers' beliefs and reported practices. First, more teachers professed beliefs in line with NAEYC's guidelines than did not. However, reported beliefs and practices were only moderately correlated. Even though teachers may have reported developmentally appropriate beliefs, they didn't necessarily include developmentally appropriate practices frequently in their classrooms. The study also found that there was a stronger correlation between developmentally inappropriate beliefs and inappropriate practices. Regarding actual classroom practices, most classrooms consisted of a combination of developmentally appropriate and inappropriate practices. This supports NAEYC's position of being "more" or "less" appropriate or inappropriate instead of being completely appropriate or inappropriate.

Sue Vartuli (1999) reported the findings of her five-year study. The study included interviewing and surveying early childhood teachers as well as observing their classrooms in order to examine the correlation between beliefs and practices as well as looking at the

variance of beliefs and practices over the grade levels of kindergarten to third grade. First, Vartuli found that reported beliefs and practices tended to be closer to observed practices in kindergarten and preschool programs than in primary grade classrooms. While beliefs may have, at times, been close to observed practice, Vartuli's study revealed that across the early childhood spectrum, reported beliefs were more appropriate than reported and observed practices. Also, as grade level increased the level of self-reported appropriate beliefs and practice decreased. As seen in this study and others (discussed later in section 3.2), teachers who believe in more developmentally appropriate practices struggle with implementation.

One study exists comparing Finnish and American beliefs about developmentally appropriate practice. Hoot, Parmar, and Hujala-Huttunen (1996) surveyed teachers, administrators, and parents. The Finnish sample came from larger government kindergarten programs and the US sample came from Head Start kindergarten programs. Hoot et al. found that administrators and teachers in both countries had a "somewhat high level of awareness of DAPs constructs" (1996, 360). The fact that similar levels of developmentally appropriate responses came from both Finnish and American professionals suggests that NAEYC's guidelines have international implications (ibid., 361). Slight differences between the teachers from the two countries did exist. US teachers tended to favor a somewhat more didactic and skills-development approach regarding teaching strategies and language development (ibid., 362).

3.2 Difficulties with DAP Implementation

As seen in the previously reviewed studies (Vartuli, 1999; Hatch & Freeman, 1988), teachers who believe in more appropriate classroom practices tend to struggle with the implementation of those practices. Why do teachers struggle with the implementation of their developmentally appropriate beliefs? What can be done to assist teachers in implementing developmentally appropriate practice?

A number of professionals offer thoughts on the reasons for lack of implementation. Vartuli (1999) suggests that teachers' inappropriate practices may be influenced by local and state mandates, peer pressure, and school culture. These three possible influences all fall under Van Fleet's definition of "education" as discussed previously in this report (section 2.2) (see Einarsdóttir, 2003).

Hatch and Freeman's (1988) study seems to point the finger directly at an Ohio state mandate that requires Pupil Performance Objectives (PPOs) in reading and in mathematics. These standards specify, "in behavioral terms," expected academic abilities for normally developing children. One example of a preschool task included in Ohio's PPOs is, "The student will be able to count from one to twenty" (see Hatch & Freeman, 1988, 155). If this task is considered in light of the developmental assumption that suggests basic academic skills are acquired by the end of third grade regardless of classroom type (Marcon, 2002, 18), it seems useless to test for this specific skill already in preschool. Surely a child who can only count to 12 by the end of preschool will be able to count to 20 and beyond by the end of third grade. In this case, teachers adhering to PPO requirements (100% of the teachers) have drifted toward academic, skill-oriented teaching methods in order to "cover" the requirements.

Goldstein (1997) adds a unique perspective to the causes that inhibit the implementation of developmentally appropriate practice. She studied one teacher who taught in an ungraded primary classroom (traditional grades of preschool through second grade) at an elementary school in Northern California. A quick look at policies and structure that influenced her teaching would suggest that everything was in place for the implementation of developmentally appropriate practice. The state of California had a policy which specifically embraced the use of developmentally appropriate practice in the primary grades. In addition, the teacher taught at a school priding itself on progressive classroom practices and offering an "explicitly child-centered and experiential educational environment" (Goldstein, 1997, 7). However, as Goldstein discovered, even this teacher struggled to implement developmentally appropriate practice.

Goldstein (1997, 8) saw this teacher's struggle in three parts: personal interpretation, partial adoption, and inconsistency in implementation. These three issues quite possibly apply to many other early childhood educators and offer an opportunity to examine the nature of NAEYC's guidelines more thoroughly.

Personal interpretation is, to an extent, an inherent dimension of NAEYC's guidelines. NAEYC does not endorse any specific curriculum but instead sets forth information about child development and the nature of appropriate classroom practice (Bredekamp & Copple,

1997). Because teachers are “decision-makers” they use this information along with their own professional knowledge and skills to implement practices that are appropriate for their particular teaching situation. In Goldstein’s words:

The NAEYC guidelines...are not intended to serve as a cookbook filled with failure-proof recipes for exemplary early childhood education. The guidelines exist to be interpreted and implemented in specific contexts, in direct response to the needs, personalities, capabilities, and interests of the children and teachers involved (1997, 13).

In this case, Martha, Goldstein’s subject, placed a high value on knowing the individual child. She added that “investing in them emotionally” was also necessary to know the individual child (1997, 12). Martha’s commitment to knowing the individual child was so central to her understanding of DAP that other dimensions of DAP may have been marginalized.

According to Goldstein, Martha’s struggle is not unique. She states, “Personal interpretation becomes troublesome...when teachers’ understandings of DAP are cloudy, off base, or just plain wrong” (1997, 13). This is one of the reasons for NAEYC’s publication of the 1997 revision, “to express [its] position more clearly...”(Bredekamp & Copple, 1997, 4).

Partial adoption of DAP was another struggle that Goldstein observed. The specific issue, as Goldstein saw it, was Martha’s unwillingness to give children choices “in all ways [and] at all times” (1997, 14). Indeed, individual choice is a central theme to NAEYC’s guidelines. “Teachers provide children with opportunities to make meaningful choices...” (Bredekamp & Copple, 1997, 18), and “...teachers strive to achieve an optimal balance between children’s self-initiated learning and adult guidance or support” (Bredekamp & Copple, 1997, 17) are two statements that support the notion of child choice but also call for balance and teacher discretion. Perhaps Martha has not achieved “optimal balance” in her classroom. While continued effort toward this goal is desirable, 100% compliance with and achievement of NAEYC criteria is difficult and unnecessary according its accreditation requirements (Information for Programs).

Inconsistency in implementation is the final dimension of Martha's struggle according to Goldstein. In reality, this is the broader struggle that the majority of early childhood teachers face. As Goldstein (1997, 16) puts it, "[Martha's] beliefs and her words are more consistent with the themes of DAP than is her practice." This statement rings true in study after study regarding teachers' pedagogical beliefs and classroom practices. Why is this inconsistency so and what, if anything, can be done about it?

3.3 Influencing Teachers Beliefs and Practice

If developmentally appropriate practices, as defined by NAEYC, are truly the most effective teaching methods for the healthy cognitive, social, and emotional development of young children, how can teachers and other professionals be influenced first, to believe in DAP constructs and second, to implement those beliefs effectively? While it has been proved that beliefs and practices need to be measured separately, these two dimensions are very interconnected when helping teachers improve classroom practices. Suggestions for helping teachers improve classroom practices follow.

The research reviewed for this report suggests that the majority of early childhood teachers believe in practices that are more developmentally appropriate than inappropriate. Even so, a continued effort needs to be made in order to strengthen appropriate pedagogical beliefs and practices in teachers. One obvious way to begin influencing teachers' beliefs and practices is through pre-service (training before employment as a teacher, i.e. university education) and in-service (training taking place while employed as a teacher) training that focuses on research about developmentally appropriate practice and its influence on short-term and long-term development. In a study conducted by Snider and Fu (1990), teachers who had a degree in child development or early childhood education that included formal child development training and supervised classroom experience were significantly more likely to be knowledgeable and skillful in developmentally appropriate practice. Furthermore, supervised practice without formal child development training did not appear to influence teachers' knowledge of developmentally appropriate practice. Also, length of employment within the early childhood field did not seem to have an effect on teachers' knowledge of developmentally appropriate practice. Two studies support this notion. First, Mangione and Maniates (see Dunn and Kontos, 1997) reported that teachers receiving in-service training in the form of workshops, site visits, and reflective journals reported using more developmentally appropriate practices. From previous research (Vartuli, 1999), we

know that reported practices are not 100% congruent with observed practice. Nevertheless, Mangione and Maniates' study indicates movement in a more appropriate direction. Sherman and Mueller (see Dunn & Kontos, 1997) reported that teachers who received training on the implementation of developmentally appropriate practice used appropriate practices more often than teachers who did not get the training. All of these studies point to focused training at the pre-service and in-service level as effective methods for helping teachers improve classroom practice.

Another dimension to the implementation of developmentally appropriate practice in the classroom is administrative and government policies. As evidenced by the Hatch and Freeman study (1988), appropriate teacher beliefs have little effect on classroom practice when government policies dictate curriculum goals that are behavior-oriented and norm-referenced in nature. Even when government and local policies are in line with knowledge about developmentally appropriate practices, teachers can still struggle with full implementation (Goldstein, 1997). Regardless, administrative and government policies can and do have an effect on classroom practices.

Elkind (see Aldridge, 1992, 5) suggests that there is little hope of realizing genuine implementation of developmentally appropriate practice as long as schools use a "psychometric educational psychology model which is quantitative, based on sequential skills, and achievement test oriented." While broad reform of educational models in both Finland and the USA is unlikely in the near future, Goldstein's study provides one example where both state and individual school policy are in line with developmental appropriateness. The early childhood education community consisting of teachers, daycare providers, researchers, and parents needs to work to educate and influence educational policy makers at local, state, and national levels.

3.4 Predictors of Developmentally Appropriate Beliefs and Practices

Knowing what factors predict developmentally appropriate beliefs and practices can be beneficial when considering how best to achieve developmentally appropriate classroom practice. There are a number of possible factors that exist in teachers' personal and professional lives that affect the way they teach. Current research has isolated several factors in teachers' professional lives that play a role in both teachers' beliefs and classroom practices.

Current research has divided the factors into two categories: *class variables* and *teacher variables*. Class variables include factors such as class size, socio-economic status of classroom pupils, and grade level. Teacher variables include factors such as the teacher's education level, years of teaching experience, and perceived level of teacher's own control over the classroom curriculum.

Several interesting results have come about from current research. First, regarding class variables, developmental appropriateness decreased as grade level increased from first to third grade (Buchanan, Burts, Bidner, White, & Charlesworth, 1998; Maxwell, McWilliam, Hemmeter, Jones-Ault, & Schuster, 2001). Vartuli (1999) found similar results. Teachers' self-reported beliefs and practices decreased as grade level increased. Results between Buchanan's et al. (1998) and Maxwell's et al. (2001) differ somewhat regarding the effect class size has on appropriate practice. According to Buchanan et al. (1998), higher numbers of children in the class predicted developmentally inappropriate beliefs and activities. However, Maxwell et al. (2001) found that class size did not predict appropriate practices. The authors suggest that perhaps class size must be significantly smaller in order to predict more appropriate practices. In Maxwell's et al. (2001) study, the average classroom size was above the US Department of Education and NAEYC recommended 18 pupils.

Teacher variables also played a role in predicting appropriate practices. In Maxwell's et al. (2001) study, teacher beliefs were tested as one of the teacher variables and not as something to be effected by the variables. They found that teacher's beliefs did predict classroom practices. As Maxwell et al. state, this finding can be two-sided. On the one hand, it seems to suggest that appropriate beliefs would predict appropriate practices. As seen from other research, this holds true to a certain degree. These research findings imply that changing teachers' pedagogical beliefs could change teacher's classroom practices. However, Maxwell et al. (2001) cite research by Guskey (1986) that suggests the opposite is true. Guskey found that changing teachers' classroom practice leads to changing their beliefs. Regardless of whether beliefs influence practice or practices influence beliefs, we can assume that both beliefs and practices are intricately interdependent.

Teachers who believed that they had a high amount of influence on the implementation of classroom curriculum were more likely to agree with developmentally appropriate beliefs and less likely to report developmentally inappropriate activities taking place in their classrooms (Buchanan et al., 1998). This finding supports the notion of the teacher as a decision-maker, capable of planning and implementing a curriculum based on knowledge of child development and individual children in the classroom.

4 CROSS CULTURAL COMPARATIVE APPROACH

4.1 What is Comparative Education?

Comparative education can come in several different forms. Perhaps the most popular form is competitive comparison. Comparisons in this realm are usually based on international tests. Economic rivalry (often with connections to military rivalry) as well as international prestige have played a role in the competition (King, 2000, 268). Additionally, international test results tend to spark debate regarding the state and direction of national education.

Comparative education can also be seen in the context of globalization. For example, in 1991 the Bush administration (in the United States) set forth six National Educational Goals titled *Goals 2000*. A year earlier in 1990, the UNICEF-sponsored World Summit for Children set forth seven goals titled *Target 2000*. While the United States was aiming to increase the high school graduation rate to 90%, the UNICEF sponsored summit aimed toward basic educational access for all with the completion of primary school by 80% of primary-aged children. When the United States declared “all children in America will start school ready to learn,” UNICEF declared that the protection of children in “especially difficult circumstances” will be “improved” (see Alexander, 2000, 25). Clearly, disparities in human development remain among the world’s children.

Finally, there is the more general comparison between educational systems. Traditionally, comparing educational systems is done by first accurately describing the system, then analyzing it, and finally forming generalizations about the workings of the system (Grant, 2000, 309). When comparing educational systems around the world, the words of Michael Sadler (1900) provide much needed insight. “In studying foreign systems of education we should not forget that the things outside the schools matter even more than the things inside the schools...All good and true education is an expression of national life and character” (see Alexander 2000, 27). Almost 100 years later, Bruner’s (1999, 14) words ring with the same tone. “...[P]edagogy is an extension of culture, or perhaps even better, a specialization of it.”

4.2 DAP in the Global Context

NAEYC, while basing its position on a long history of philosophers and psychologists from the international community, is, in essence, an American organization advocating on

behalf of children in the United States. The principles that NAEYC's position espouse, however, are not bound to American soil. They are principles that early childhood professionals in other cultures and countries are currently debating (Kwon, 2003; New, 2001).

The Association for Childhood Education International (ACEI) has endorsed NAEYC's position on developmentally appropriate practices (Kostelink, et al., 2004). ACEI has published *Global Guidelines for Early Childhood Education and Care in the 21st Century* (ACEI, 2002). These guidelines outline seven dimensions of quality early childhood education including:

- 1) overall philosophy, goals, and policies
- 2) environment and physical space
- 3) curriculum content and pedagogy
- 4) early childhood educators and caregivers
- 5) partnerships with families and communities
- 6) young children with special needs
- 7) accountability, supervision, and management

These dimensions mirror many of NAEYC's guidelines but state them in more global terms. NAEYC guidelines provide more detail.

4.2.1 Culture and context in development and learning

A review of literature regarding any global definition of quality in early childhood education continually raises the vital issue of context and culture (Woodhead, 1998; Bruner, 1999; Holloway, 1999; New, 1999; Phillips & Ochs, 2003). NAEYC's position has been criticized for its lack of discussion regarding cultural and contextual factors in childhood education. That is largely why the authors added the principle of cultural appropriateness in the revision (Bredenkamp & Copple, 1997). Woodhead (1998) argues strongly against DAP and instead offers what he calls "practice appropriate to the context of early development" (PACED). One feature of Woodhead's PACED is, "The teacher/careworker should consider the age and individuality of children, as well as the social context of their care..." (Woodhead, 1998, 10). This sounds very similar to NAEYC's position which calls on teachers and other early childhood professionals to base their decisions on knowledge regarding the age, individuality, and social and cultural contexts in which children live (Bredenkamp & Copple, 1997, 9). Perhaps the main

difference between NAEYC's position and literature regarding global definitions of quality is one of emphasis. While NAEYC's position seems to emphasize the maturational development of the child, the global debate about quality sees culture as paramount.

Within the white, middle-class, American environment that NAEYC's position was originally published (Bredekamp, 1987), culture was largely taken for granted. The position statement was written primarily by and for one culture. After 10 years of debate and criticisms about NAEYC's position, those responsible for authoring the position statement added the dimension of cultural appropriateness. This addition was primarily written to address the multiple cultural groups that reside in the United States. NAEYC's position statement was not intended to influence international teaching practices. However, when an organization such as ACEI endorses NAEYC's position, consideration is likely to be given to international usability of NAEYC guidelines. This type of "cultural diffusion" from one country (in this case the United States) to any number of other countries can be looked at in at least four different ways according to Hoffman (2003). With regard to NAEYC's guidelines, Hoffman's idea of "hybridization," i.e. local ideas being recombined with non-local ideas making something new, could be a feasible way of using NAEYC's guidelines internationally.

This study attempts to move the idea of developmentally appropriate practices into the international context, specifically to Finland. In order to do this, advice from authors such as Woodhead (1998), Bruner (1999), Holloway (1999), New (1999), and Phillips and Ochs (2003) should be heeded. Attention must be given to the cultural contexts in which children live. NAEYC's guidelines highlight cultural context as important to the development and learning of children. NAEYC's position does not rank age appropriateness, individual appropriateness, and cultural appropriateness (Kostelink et al., 2004). However, in order to move NAEYC guidelines into an international context, it may be best to consider cultural appropriateness, as defined by local stakeholders (e.g. parents, teachers, politicians, children themselves), as the most important dimension of NAEYC's guidelines.

4.2.2 Previous cross-cultural use

Studies have been conducted in which developmentally appropriate practices were examined among different cultures. Burts et al. (1992) found that when socio-economic

status was high, race differences in exhibited stress behaviors did not exist between American children in developmentally appropriate classrooms. Additionally, Sherman and Mueller (1996) found that Hmong (a cultural minority in the United States who come from Southeast Asia) children and non-Hmong children both benefited from developmentally appropriate classroom practices. Finally, Hoot et al. (1996) found that early childhood professionals in both the United States and Finland have similar beliefs regarding developmentally appropriate practices. With special attention to cultural contexts, the underlying principles of NAEYC's position can guide early childhood programs and educators in countries other than the United States.

4.3 Why Compare?

Borrowing ideas is one reason for comparing systems (Grant, 2000, 313). However, as was just discussed, borrowing is something that must proceed with caution. Foreign ideas have been implemented into local educational systems in the past, but practices are often intertwined so closely within the context they exist that simply transplanting an idea as is into a foreign context does not work. While NAYEC's position is rooted in empirical data about child development and learning, these data have been criticized based on their Western origins (Woodhead, 1998). Data from Western research may not hold true in Eastern cultures. In this case, however, NAEYC standards are being examined within Finnish culture. It has been written that Finland is located "between East and West" (University of Joensuu, 2004). Due to its geographical location on the European continent and its political status as a member of the European Union, Finland could be considered a Western culture and nation. The empirical data NAEYC uses to support part of its position would likely be applicable to the Finnish context. Whether or not NAEYC guidelines themselves are desirable in the Finnish context is a value decision Finnish teachers, administrators, parents, and others concerned about child development and learning need to make.

Comparisons also provide a **framework for analyzing** one's own educational system (Grant, 2000, 315). When education systems foreign to our own are studied, descriptions are generated that highlight both similarities and differences between the two education systems. Through the lens of the foreign system one can begin to consider the situation of his own system. Previous assumptions may be challenged. Alternative solutions may be considered. In Grant's words (2000, 315), "It is possible to examine one's own system

critically from the inside, but it is more difficult without a comparative perspective. The very existence of other assumptions and practices can provide a necessary challenge to some of our own.”

In the context of NAEYC’s position it is possible to examine the concept of early childhood in both the United States and Finland. Strict definitions of early childhood in the U.S. and Finland are difficult to come by. One possible definition of early childhood in the U.S. is from birth through age five. Generally, this is the age before the child starts compulsory education (between five and eight depending on the state) (Cryer & Clifford, 2003, 3). Specifically, this is the age when children are eligible for the federally funded early childhood program, Head Start (Head Start Bureau, 2003). In Finland one definition is from birth through the age of six, at which time the child begins compulsory education (OECD, 2001; see Husa & Kinos, 2005). However, it has been suggested recently within Finland that early childhood covers the years birth through age eight (see Husa & Kinos, 2005). This definition is identical to NAEYC’s definition. NAEYC’s conception of early childhood could also be applied to the specific U.S. conception of early childhood since the organization is a U.S. organization. In Finland NAEYC’s definition would include first and second grade while in the U.S. it would include first, second, and third grade.

NAEYC’s definition, like its position as a whole, is based on data about child development and learning. Educational personnel in both Finland and the United States can use NAEYC’s definition to consider current domestic definitions of early childhood and the educational and care structures that serve those ages. Perhaps the current structures do not provide the best possible education for children under eight years old. Maybe the teaching methods within the current structures should be altered. Regardless of conclusions reached, the consideration of other definitions of early childhood is beneficial to the continued effort toward improved early childhood education.

4.4 Teacher Beliefs in Educational Systems

Teachers’ pedagogical beliefs are one part of an education system. They are nestled among and contingent upon multiple factors within the immediate education system. Examples include the curriculum, the school environment, societal expectations, teacher training, and government policies toward education. These factors and many others like them are sure to differ between education systems of different countries. If we wish to understand teachers’

beliefs we need to try to understand the context in which those beliefs exist. A description of the educational contexts in Finland and the USA follows. Due to the decentralized nature of the US education system, both the state of Minnesota and the state of Washington will be discussed. Respondents in this study are from Minnesota and Washington.

4.5 Context of Finnish and American Education Systems

4.5.1 Compulsory schooling

Compulsory schooling begins at age seven in Finland (Eurydice Database on Education, 2003). In the United States the age of compulsory schooling depends on the state. In Minnesota the age is seven (Minnesota Statute 120A.22/2002). In Washington the age is eight (Revised Code of Washington 28A.225.010/1998). In both countries education is free to all school-aged children and their families (there are private options in the US). In Finland, first grade children attend school 190 days a year for approximately 19 hours per week (Eurydice Database on Education, 2003). In the states of Minnesota and Washington, the school year consists of approximately 180 school days (Minnesota Statute 120A.41/2003; Revised Code of Washington 28A.150.220/1993). Students attend school for approximately 27.5 hours per week (Minnesota Statute 120A.41/2003; Revised Code of Washington 28A.150.220/1993). In all three places, legislation exists giving teachers the freedom to choose their own teaching methods (Eurydice Database on Education, 2003; Minnesota Statute 120B.02/2003; Revised Code of Washington 28A.150.210/1993).

4.5.2 Curriculum

In Finland, the government has set forth minimum subjects that first graders must study. They include mother tongue and literature, mathematics, science and health, and religion or ethics (Eurydice Database on Education, 2003). The state of Minnesota lists subject areas to be studied throughout comprehensive education. They include language arts (mother tongue), mathematics, science, social studies (history, geography, economics, and government and citizenship), health and physical education, and arts (must require two from dance, music, theater, and visual arts) (Minnesota Statute 120B.021/2003). The state of Washington describes its common school curriculum in looser terms. It essentially calls for instruction in language arts, mathematics, science and health, and social studies (Revised Code of Washington 28A.230.020/1991).

4.5.3 Assessment

Finnish policy calls on assessment to “guide and encourage study” and to “develop pupils’ self-assessment skills.” It also states that assessment should be continuous and based on “each pupil’s own learning and growth process.” There are nationally issued criteria for pupil assessment (Eurydice Database on Education, 2003).

Minnesota policy talks about state and district-wide assessment for the purpose of “accountability.” Assessment is to be conducted in the areas of the state-mandated curriculum and reported publicly (Minnesota Statute 120B.31/2003; Minnesota Statute 120B.35/2004). Accountability is clearly the principal purpose of assessment according to state statutes. There is mention that when reviewing the “statewide educational accountability and reporting system,” officials should also consider “the impact of a testing program on school curriculum and student learning” (Minnesota Statute 120B.31/2003).

Washington law calls on assessment to evaluate teaching practices so that they can be adjusted. Specifically, it states that if students’ scores on state-prescribed tests “indicate that students need help in identified areas, the school district shall evaluate its instructional practices and make appropriate adjustments” (Revised Code of Washington 28A.230.195/1999).

4.5.4 Social development

Both Finland and the state of Washington discuss the social development of young children in their respective policy documents. Finland discusses the importance of taking into consideration the individuality of pupils as well as the meaning of social interaction (Eurydice Database on Education, 2003). The state of Washington calls for “an educational environment that fosters mutually respectful interactions in an atmosphere of collaboration and cooperation” (Revised Code of Washington 28A.150.210/1993). No mention of social development could be found in Minnesota educational statutes.

4.5.5 Parents

Minnesota statutes discuss serving students by “cooperating with the students’ parents and legal guardians to develop the students’ intellectual capabilities and lifework skills in a safe and positive environment” (Minnesota Statute 120A.03/1998). Washington statutes discuss parent involvement as a requirement for future statewide student achievement. The

policy states, “Parents [are] to be primary partners in the education of their children, and to play a significantly greater role in local school decision making,” (Revised Code of Washington 28A.150.210/1993). Finnish policy did not discuss parent involvement in compulsory education grades one to six. They do discuss parents in the realm of pre-primary education (Eurydice Database on Education, 2003).

4.5.6 Teaching methods

All of the policy makers involved with the education systems discussed here allow teachers to use their own teaching methods. There is research, however, describing the predominant methods used in both the United States and Finland. Dunn and Kontos (1997) reviewed the American research and reported that as little as one-third to one-fifth of programs studied in the United States “exemplify developmentally appropriate practice.” Research also suggests that as grade level increases, the amount of appropriate classroom practice decreases (Vartuli, 1999; Buchanan et al. 1998; Maxwell et al. 2001). Even when government policies toward developmentally appropriate practices are favorable, teachers may continue to struggle with implementation (Goldstein, 1997). There is also evidence that suggests didactic teaching is more common in preschool and first grade classrooms that have high percentages of African-American students and in which teachers believe poverty-related problems hinder parents’ involvement in their child’s education. The evidence goes on to suggest that constructivist teaching is more prevalent in classrooms with high percentages of Caucasian children (Stipek, 2004). In American first grade classrooms, we can expect programs that mix both didactic and child-initiated approaches toward learning often depending on background characteristics of the teacher and classroom (Buchanan et al. 1998; Maxwell et al. 2001).

Finnish teaching methods in primary grades have been described as “traditional” and “led by the teacher” (Eurydice Database on Education, 2003). However, in addition to these traditional methods, which are described as “common” by the authors writing for the database, there is an effort to include methods that “focus more on pupils.” The national core curriculum sees the student as an active “...organizer of his/her own structure of knowledge” (Eurydice Database on Education, 2003). Lattu (2003) worked with and studied 11 Finnish primary grade teachers over the course of an academic year with the goal of “opening the learning environment.” He found that in all 11 cases “...the opening of the learning environment meant that teachers had to make exceptions to what was

considered normal. Making these exceptions was possible, but required extra effort from the teachers,” (Lattu, 2003, 172). Child-centered teaching was not the norm in the schools studied by Lattu. Brotherus (2004) examined activities in preschool education (the year preceding first grade) and found that activities alternated between teacher-directed activities and undirected activities. Finnish preschool can be located in a variety of settings including daycare centers and primary schools. While preschool activities in daycare centers focused on weekday routines, preschool activities located within schools focused on subjects. One should expect differences between a preschool classroom and a first grade classroom and therefore shouldn’t apply Brotherus’ findings directly to a first grade classroom. However, if teacher-directed methods and subject teaching are characteristic in preschool classrooms, it is reasonable to expect some of the same methods in Finnish first grade classrooms.

5 RESEARCH QUESTIONS

1. What are the beliefs about developmentally appropriate practices of American and Finnish first grade teachers and how do they compare and contrast?
2. What are the reported practices of American and Finnish first grade teachers and how do they compare and contrast?
3. What are the dimensions of teachers' beliefs and practices among American and Finnish first grade teachers?
4. What are the relationships between appropriate beliefs and practices and inappropriate beliefs and practices among Finnish and American teachers?
5. Are there background characteristics that correlate with developmentally appropriate/inappropriate beliefs and/or reported appropriate/inappropriate activities?
6. Which factors do American and Finnish teachers perceive as having the most influence on the way they plan and implement classroom practice?

6 DATA COLLECTION PROCEDURES AND METHODS

6.1 The Sample

The current study surveyed 17 Finnish first grade teachers and 23 American first grade teachers. From the Finnish sample 11 taught in Joensuu, 3 taught in Liperi, 1 taught in Kaavi, 1 taught in Kuhmo, and 1 taught in Lieksa. From the American sample 7 taught in Fergus Falls, Minnesota, 3 taught in Virginia, Minnesota, 6 taught in Saint Peter, Minnesota, and 4 taught in the Eveleth-Gilbert school district in Minnesota. An additional 3 teachers surveyed taught in Pullman, Washington in the Northwestern United States.

The American sample came from towns of roughly 10,000 to 20,000 inhabitants in relatively rural locations. The economic conditions of these locations could generally be considered less advanced than more metropolitan locations. Similarly, the Finnish sample came from relatively rural locations with generally less advanced economic conditions than higher population regions in Southern Finland. The majority of Finnish respondents came from Joensuu, a town of approximately 50,000 inhabitants. While this is larger than the American towns in this sample, Joensuu is located in a region of Finland characterized by forests and a sparse population.

6.2 The Instrument

The instrument used in this study was a revised version of The Teacher Questionnaire: Primary Version (Burts, Charlesworth, Hart, 1992). The revised questionnaire contains both a 36-item Teacher Beliefs Scale (TBS) and a 33-item Instructional Activities Scale (IAS). Additionally, it asks teachers to supply background characteristics (including first grade teaching experience, level of education, and the number of children in the class) and asks teachers to report the amount of influence specified items have on the way they plan and implement instruction. One Finnish teacher and I studied the original version to check that the ideas presented in the questionnaire were understandable in the Finnish context. With suggestions from the Finnish teacher and my supervisor, I revised the original version. Item number 16 on the TBS was changed slightly to be clearer⁶. Items 63 and 64

⁶ The original reads, 16) It is ___ for children to be allowed to cut their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing activities. The revised item reads, 16) It is ___ for children to be allowed to initiate, plan, and perform, own activities (for example, cutting their own shapes, performing own steps in an experiment, planning own creative drama, art, writing activities).

on the original IAS were combined to form one new, more general statement⁷. The use of “primary grades” was changed to “first grade” where appropriate in the questionnaire.

Once the English version of the questionnaire was suitable, it needed to be translated into Finnish. A Finnish colleague from the English Department at the University of Joensuu translated the questionnaire, asking me for meaning clarification when necessary. The Finnish version was then given to a Finnish first grade teacher to examine. This teacher and I went through each statement meticulously, going back to the original English text to check for congruent meanings. A number of revisions were suggested and were shown to my English Department colleague who made the final corrections in the text.

6.2.1 The TBS and IAS

Because teacher beliefs fall along a continuum of beliefs between didactic and child-centered, the Teacher Questionnaire requires teachers to respond on a 5-point Likert scale instead of simply agreeing or disagreeing with a statement. From the English version of the questionnaire, a statement from the TBS might read, “It is ____ for first grade children to learn through active exploration.” Teachers are to rate the importance of each statement from *not important at all* (1) to *extremely important* (5). Statements on the IAS include, for example, building with blocks, creative movement, and rote counting. The teacher rates the frequency of each activity within his or her classroom on a 5-point scale from *almost never, less than monthly* (1) to *very often, daily* (5). Complete copies of both the English and Finnish versions are attached in the appendices.

6.2.2 Background characteristics

Descriptors of teacher and classroom characteristics were also included in the Teacher Questionnaire. Each teacher reported the number of children in her class, the number of years she has taught first grade, and her highest degree earned. Knowing these three background characteristics gave a better description of both the American and Finnish sample.

⁷ Both 63) sitting for longer than 15 minutes, and 64) waiting for longer than 5 minutes between activities were deleted. The revised item reads, 63) waiting while others are finishing activity.

In addition to simply describing the samples, knowing these background characteristics could offer additional explanations to any significant differences in beliefs or reported practice between American and Finnish teachers.

Class size was the only classroom characteristic elicited in this questionnaire. NAEYC's position statements in both 1987 and 1997 declare that classrooms with large numbers of children (over 18 children with one teacher, over 25 children with a second adult) are inappropriate (Bredenkamp, 1987; Bredenkamp & Copple, 1997). Buchanan, et al. (1998) found that higher numbers of pupils in the classroom predicted developmentally inappropriate beliefs and practices. Class size did not predict appropriate beliefs or practices in Buchanan's et al. (1998) study or a study by Maxwell et al. (2001).

One teacher characteristic obtained was first grade teaching experience. It seems logical that teaching experience would have some affect on the way teachers teach. Maxwell et al. (2001) suggest that experience could affect teaching either way. Less experience could mean more recent training in developmentally appropriate practices, which could lead to more belief in and implementation of appropriate practices. However, teachers with more experience should be more comfortable and confident as teachers and could possibly implement more appropriate practices. The authors cite studies where relationships between experience and appropriate practices have been reported. However, neither Maxwell's et al (2001) nor Buchanan's et al. (1998) studies reported any relationship between the two variables.

The second teacher characteristic obtained was level of education. In comparing teachers from Finland and the United States, education level could be a significant difference between the two samples. A bachelor's degree and certification in elementary or early childhood education is generally the minimum requirement to teach first grade in the United States. In Finland, however, a master's degree in classroom teaching (grades 1-6) is required in order to teach first grade. Neither Buchanan et al. (1998) nor Maxwell et al. (2001) found a significant relationship between education level and classroom practice. Buchanan et al. (1998) did find that type of education (early childhood degree vs. elementary education degree) mattered. Benson-McMullen and Alat (2002) found that teachers of 3 to 6-year-olds with a bachelor's degree or higher reported stronger developmentally appropriate beliefs than colleagues with less education.

Because of the differences in early childhood/primary school teacher training (the United States having more overlap between age of students and type of education than in Finland), the simpler characteristic of education level was used.

6.2.3 Seven influences on teachers

Teachers' practices are likely influenced by any multitude of factors including their own pedagogical beliefs. There is research that suggests both cases, external influence and self-influence, may play a role in classroom practice. Some research suggests that teachers who perceive themselves as having more influence than others (e.g., principal, parents, other teachers) on the way they plan and implement instruction do so more appropriately. Other research suggests that others often influence teachers' practices (see Buchanan et al. 1998, 463). If teachers' practices are influenced by factors other than themselves, what are some of the more likely influences? The Teacher Questionnaire: Primary Version (Burtis, Charlesworth, Hart, 1992) asks teachers to respond to seven likely influences.

These seven items were listed at the beginning of the Teacher Questionnaire. Teachers did not rank the seven items in order of perceived influence but instead rated each item individually on a scale of 1 ("very little influence") to 5 ("much influence"). Items included were parents, the curriculum, the principal, government regulations, other teachers, the school board (or local education authority), and the teacher (him or herself).

6.2.4 Correlation to specific dimensions of NAEYC's position

The Teacher Questionnaire: Primary Version was designed to represent specific dimensions of NAEYC's position statement. Because the questionnaire was written in 1992, it represents the original 1987 position. However, the 1997 position statement does not veer drastically from the original, especially with regard to overall dimensions of appropriate practice. The principal differences are that of emphasis and clarification on specific points.

The TBS was designed to test for teacher beliefs about assessment, integrated curriculum and its goals, community and social development, teaching strategies, and parent/teacher relationships. The IAS was designed to check for reported activities within these same dimensions of NAEYC's position.

6.3 Data Collection

The Finnish sample was originally intended to come entirely from Joensuu teachers. With assistance from Dr. Martti Siekkinen, the administration office of the Joensuu school district was contacted and a request was made to survey the first grade teachers of Joensuu. Permission was granted from the main offices and authority was then given to individual school principals to grant permission. One principal denied the request to survey teachers at his school due to an overload of various requests.

Surveys were mailed to all Joensuu teachers teaching at schools where permission had been granted. In addition to the survey, teachers received an addressed envelope with paid postage. An email had been sent to all of the teachers explaining the study and providing instructions on how to complete the survey. After a week and a half of waiting and only four surveys returned, an additional email was sent. The low response rate continued.

The majority of Joensuu teachers were either unwilling or unable to complete and return the survey. This was due, presumably, to lack of time in their teaching schedule or to an overload of requests for interviews/surveys from other students. An alternate plan was devised with cooperation from my university supervisor. This plan consisted of, first, asking first grade teachers at the university's Normal School (100% return rate) to complete the survey as well as asking them if they had colleagues that would be willing to participate in the study. In addition to teachers at the Normal School, colleagues of my supervisor were also contacted. As mentioned earlier, 17 surveys were returned for an approximate return rate of 60%.

The American sample proved easier to get but was also non-random. The American sample came from five independent school districts. I chose these five districts to survey because I had contacts within each district that could assist in distributing and collecting the survey. Choosing school districts in which I had contacts was necessary due to me living in Finland. In two of the school districts, I contacted the superintendent for permission who then passed the authority on to either school principals or to individual teachers. In both cases, the contact person collected the surveys. In the other three schools, I contacted teachers I knew (none of them first grade teachers) who took it upon themselves to distribute and collect the surveys. The American response rate was 100%.

6.4 Reliability

Caution must be exercised when considering the results of this study. First of all, the sample size was small due to the pilot-study nature of the research. The terms “American” and “Finnish” are used throughout this report, yet 23 American teachers and 17 Finnish teachers can hardly be seen as representative of all teachers in the United States and Finland. Secondly, the Finnish and American samples came from geographic areas that, while similar to each other, may not represent their respective nations as a whole. Teachers in the American sample are likely to face different teaching realities than teachers in other parts of the United States, for example in more urban settings. Likewise, the Finnish sample may not represent teachers in other parts of the country, for example the more heavily populated South or sparsely populated North. Because of the non-representative nature of the sample, the small sample size, and low response rate among Finnish teachers, the external validity of this study could be considered relatively low, thus the results are preliminary. Finally, beliefs and practices were self-reported by teachers. Additional information could be gathered via classroom and teacher observations, interviews, reflective journals and other data gathering techniques. Questionnaires were used in this study due to scope, language barriers, and previous studies that have used the same or very similar questionnaires.

6.5 Data Analysis

Descriptive analyses including mean and standard deviation were used to describe both Finnish and American teachers’ responses to the TBS and IAS as well as describing teacher influences and background characteristics. T-test analyses were used to indicate when significant differences existed in the responses of the two independent samples. Factor analyses were conducted in order to describe the dimensions of developmentally appropriate beliefs and practices within the unified American and Finnish sample. Cronbach’s alpha was used to determine internal consistency of each dimension of beliefs and practice. Factor scores were summarized for appropriate and inappropriate beliefs and practice and used to determine correlations (using Pearson correlation) between appropriate beliefs and practices and inappropriate beliefs and practices. Pearson correlation analyses were also conducted in order to describe relationships between the three background characteristics and appropriate and inappropriate beliefs and practice.

7 RESULTS

This study begins by describing teachers' appropriate and inappropriate beliefs and practices; it continues by describing dimensions of those beliefs and practices. Understanding the beliefs and practices that exist is important in the continued effort to implement best practice in primary grade classrooms. Additionally, relationships between beliefs and practices are analyzed. Background characteristics including class size, education level, years of teaching experience were all analyzed in relation to appropriate and inappropriate beliefs and practice. Finally, factors that influenced teachers' planning and implementation of practices were described separately for the two independent samples and then compared in relation to one another.

The following description of beliefs and practices examines responses in two ways. First, a description of beliefs and practices of each country is given in relation to their place along the continuum of appropriate and inappropriate. Secondly, responses from each country sample are described comparatively in relation to each other's responses.

7.1 Beliefs about Developmentally Appropriate and Inappropriate Practices

Describing appropriate and inappropriate beliefs among Finnish and American first grade teachers is the first step to understanding the dynamics of classroom practice (Table 1). American teachers had item means on the TBS that ranged from 2.18 to 5 (average SD=0.761). Finnish teachers had item means that ranged from 1.88 to 4.94 (average SD=0.759). Of the 36 items on the TBS, American teachers reported more appropriate than inappropriate beliefs on 28 items and more inappropriate than appropriate beliefs on 8 items. Finnish teachers reported more appropriate beliefs on 25 items and more inappropriate beliefs on 11 items. It appears that both groups believed more strongly in appropriate than inappropriate classroom practice.

There were 24 items with no significant difference between American and Finnish teachers, indicating that Finnish and American teachers share many of the same beliefs.

There were 12 items on which American and Finnish teachers differed significantly. On 11 of those 12 items, American teachers gave more appropriate responses than the Finnish teachers. While both groups believe more strongly in appropriate practice than

inappropriate practice, American teachers seem to have stronger appropriate beliefs and believe less in inappropriate activities than Finnish teachers.

Finnish teachers gave significantly more importance to both items regarding inappropriate assessment techniques (8, $p = 0.000$ and 10, $p = 0.002$). Additionally, three inappropriate items regarding beliefs about the use of workbooks/worksheets, flashcards, and the basal reader (20, $p = 0.000$ 21, $p = 0.000$ and 22, $p = 0.001$), were all valued significantly more by Finnish teachers. All five of these items were found to make up the inappropriate activities and materials dimension of the TBS when factor analyses were conducted. Finnish teachers seem to value inappropriate activities and materials more than American teachers.

Two appropriate items regarding beliefs about the use of functional print and invented spelling (33, $p = 0.020$ and 36, $p = 0.000$) were valued more by American teachers. It could be that Finnish teachers valued invented spelling less than American teachers because the Finnish language is phonetic and the English language is not.

American teachers reported valuing parent input significantly more than Finnish teachers ($p = 0.000$). As will be discussed later (in section 8.2.6), this could be indicative of more local control in American education.

One item, the belief about using dramatic play, was given more value by Finnish teachers than American teachers ($p = 0.023$). Dramatic play emerged as one item within the dimension of appropriate community during the factor analysis. This could indicate that Finnish teachers hold slightly stronger beliefs regarding appropriate community practices than American teachers.

Learning to read in first grade (item 38) was highly valued by both American and Finnish teachers. Because NAEYC's position states that "...most children will learn to read by the end of first grade..." and that "...some children will continue to need direct instruction in beginning reading skills...to learn to read by age 8 or 9" (Bredekamp & Copple 1997, 170), the belief statement about learning to read in first grade is deemed inappropriate.

Table 1. Comparison by Country of Teacher Beliefs Scale.

	USA		FIN		<i>p</i> (<i>t</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Appropriate Beliefs					
9 (teacher observation)	4.65	0.573	4.88	0.332	n.s.
11 (individual differences in interests)	3.78	0.795	3.47	0.800	n.s.
12 (individual differences in development)	4.39	0.783	4.47	0.514	n.s.
14 (self-esteem)	4.91	0.288	4.94	0.243	n.s.
15 (selects own activity)	3.30	1.020	3.00	0.791	n.s.
16 (children initiate, plan, perform)	3.65	0.832	3.65	0.862	n.s.
18 (active exploration)	4.57	0.728	4.29	0.588	n.s.
19 (learning through peer interaction)	4.65	0.487	4.71	0.588	n.s.
24 (teacher as facilitator)	4.74	0.541	4.59	0.507	n.s.
27 (establishing rules)	4.17	0.887	4.65	0.702	n.s.
31 (children read to)	5.00	0.000	4.76	0.437	0.041*
32 (child dictates stories)	3.96	0.825	4.18	0.529	n.s.
33 (see and use functional print)	4.39	0.783	3.76	0.831	0.020*
34 (dramatic play)	3.65	0.982	4.24	0.562	0.023*
35 (talks informally with adults)	4.57	0.662	3.94	0.899	0.016*
36 (invented spelling)	4.61	0.656	3.29	1.105	0.000***
37 (social skills with peers)	4.78	0.422	4.71	0.470	n.s.
39 (integrated math)	3.87	0.626	3.41	1.176	n.s.
40 (health and safety)	4.35	0.647	3.94	0.827	n.s.
41 (multicultural and gender neutral)	4.52	0.511	4.24	0.831	n.s.
42 (planned outdoor)	2.91	0.949	1.94	0.899	0.002**
43 (parent input)	4.35	0.775	3.29	0.772	0.000***
Inappropriate Beliefs					
8 (standardized tests)	2.18	1.006	3.35	0.862	0.000***
10 (worksheets)	3.04	0.706	3.82	0.782	0.002**
13 (separate subjects, separate times)	2.17	0.984	1.88	0.600	n.s.
17 (seatwork)	2.96	0.976	3.35	1.057	n.s.
20 (workbooks/worksheets)	2.70	0.703	3.76	0.664	0.000***
21 (flashcards)	3.22	0.850	4.35	0.606	0.000***
22 (basal reader)	3.26	0.915	4.29	0.772	0.001**
23 (whole group)	3.17	0.984	3.18	1.015	n.s.
25 (tangible rewards)	2.74	0.915	2.75	1.125	n.s.
26 (punishments and reprimands)	2.55	0.963	2.40	1.056	n.s.
28 (recognizing alphabet)	3.52	1.039	3.59	1.064	n.s.
29 (colors within lines)	2.52	1.163	2.94	0.929	n.s.
30 (prints letters)	3.70	1.020	3.59	0.795	n.s.
38 (learn to read)	4.83	0.388	4.53	0.717	n.s.
Average SD		0.761		0.759	

Note: The numbers in bold indicate more appropriate responses. **p*<.05. ***p*<.01. ****p*<.001. n.s. = no significance.

7.2 Developmentally appropriate and inappropriate practices among Finnish and American teachers

Reported practices (Table 2) do not give a complete picture of what happens in the classroom. There is evidence, however, that they correlate positively with observed practices (Charlesworth et al., 1993). American teachers had item means on the IAS that ranged from 2.04 to 4.91 (average SD=0.929). Finnish teachers had item means that ranged from 1.06 to 4.53 (average SD=0.905). Of the 33 items on the IAS, American teachers reported more appropriate than inappropriate responses (i.e. using appropriate practices more often and using inappropriate activities less often) on 19 of the items and more inappropriate than appropriate responses (i.e. fewer appropriate activities and more inappropriate activities) on 14 of the items. Finnish teachers reported more appropriate responses on 20 of the items and more inappropriate responses on 13 of the items. Teachers in both countries appear to use more appropriate practices than inappropriate practices.

There were 17 items that indicated no significant difference in reported activities between American and Finnish teachers. This is approximately half of the total items on the IAS and indicates that Finnish and American teachers use some similar practices in comparable amounts while using other practices more or less often.

There were 16 items on which American and Finnish teachers differed significantly. Of those 16 items, Finnish teachers reported using less inappropriate activities than American teachers on seven items and more appropriate activities than American teachers on one item. American teachers reported using more appropriate activities than Finnish teachers on the other eight items. In other words, American teachers used appropriate activities more often than Finnish teachers and Finnish teachers used inappropriate activities less often than American teachers.

American teachers reported using more appropriate activities and materials as well as more appropriate integrated curriculum practices than Finnish teachers (see items 44, $p = 0.007$; 48, $p = 0.003$; 49, $p = 0.001$; 53, $p = 0.000$; and 54, $p = 0.001$; 74, $p = 0.016$). However, Finnish teachers reported using less inappropriate learning activities than American teachers (see items 55, $p = 0.006$; 58, $p = 0.001$; 59, $p = 0.002$; and 73, $p = 0.047$).

Consideration regarding the differences in reported learning activities will be dealt with later (section 8.2.2).

Finnish teachers also reported using significantly fewer activities that could generally be described as inappropriate classroom management techniques including tangible rewards, loss of privilege, and isolation (items 66, $p = 0.000$; 67, $p = 0.016$; and 69, $p = 0.000$). From these results Finnish teachers could be described as more appropriate than American teachers regarding their management of the first grade classroom.

Table 2. Comparison by Country of Instructional Activities Scale.

	USA		FIN		<i>p</i> (<i>t</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Appropriate Instructional Activities					
44 (blocks)	3.35	1.152	2.35	0.996	0.007**
45 (child selects centers)	3.74	1.054	3.18	0.883	n.s.
46 (dramatic play)	2.52	0.730	3.94	0.899	0.000***
47 (listening to CDs, tapes)	3.43	0.945	3.53	0.800	n.s.
48 (creative writing)	4.17	0.778	3.12	1.317	0.003**
49 (games and puzzles)	4.04	0.706	3.24	0.664	0.001**
50 (exploring animals, plants, machines)	2.65	0.885	2.94	0.827	n.s.
51 (singing)	4.30	0.703	4.06	0.659	n.s.
52 (creative movement)	3.70	0.926	3.76	0.903	n.s.
53 (cutting own shapes)	3.52	0.846	2.29	0.985	0.000***
54 (manipulatives)	3.87	1.058	2.59	1.176	0.001**
65 (own activities in centers)	3.22	1.126	3.71	1.263	n.s.
68 (social reinforcement)	4.91	0.288	4.53	0.624	0.028*
70 (parent-made games)	2.17	1.154	1.41	0.712	0.014*
71 (planned outdoor)	2.22	0.671	2.65	0.996	n.s.
72 (multicultural and gender neutral)	3.39	0.891	2.94	1.478	n.s.
74 (health and safety)	3.78	0.795	3.06	1.029	0.016*
75 (drawing, painting, and art media)	3.65	0.832	4.06	0.556	n.s.
76 (integrated math)	3.78	0.902	3.41	0.712	n.s.
Inappropriate Instructional Activities					
55 (coloring and cutting predrawn forms)	3.52	0.846	2.71	0.920	0.006**
56 (ability level reading)	4.13	0.869	3.88	0.857	n.s.
57 (worksheets)	3.26	0.864	3.53	1.375	n.s.
58 (flashcards)	3.57	0.945	2.53	0.874	0.001**
59 (rote counting)	3.74	1.054	2.59	1.176	0.002**
60 (handwriting on lines)	4.14	0.941	3.82	0.636	n.s.
61 (reciting alphabet)	2.87	1.217	2.71	1.160	n.s.
62 (copying from chalkboard)	3.09	1.083	3.35	0.996	n.s.
63 (waiting while others finish)	3.09	1.125	3.71	0.985	n.s.
64 (large group instruction)	4.35	0.775	4.53	0.800	n.s.
66 (tangible rewards)	3.48	0.846	2.18	0.809	0.000***
67 (loss of privilege)	2.61	1.270	1.76	0.831	0.016*
69 (use of isolation)	2.04	1.107	1.06	0.243	0.000***
73 (competitive math)	2.48	1.275	1.82	0.728	0.047*
Average SD		0.929		0.905	

Note: Numbers in bold indicate more appropriate responses. **p*<.05. ***p*<.01. ****p*<.001. n.s. = no significance.

7.3 Dimensions of Teacher Beliefs and Practices

The TBS and IAS consist of statements that are either appropriate or inappropriate according to NAEYC's position. In addition to that, the statements are designed to check for beliefs and practices within the dimensions NAEYC has set forth (including integrated curriculum, teaching strategies, community and social development, the parent-teacher

relationship, and assessment). Factor analyses were conducted to see how the items in this sample correlated with each other. These newly correlated groups, or factors, could then be examined to see what dimension of NAEYC's position they were describing.

7.3.1 Teacher Beliefs Scale

Factor analyses were conducted for the TBS using the unified sample of Finnish and American teachers (Table 3). The method of principal components analysis produced six reliable factors all with eigenvalues greater than 1 and each factor accounting for over 5% of item variance. Total item variance accounted for with the six factors was 61.5%. After varimax rotation, moderate to high item loadings (.43 to .82) on the six factors were produced. Three of the factors included inappropriate beliefs and three of the factors included appropriate beliefs. Subscale reliability of each of the six factors was calculated using Cronbach's alpha. Moderate levels of internal consistency were obtained for the variables making up the six factors. This gives support to any future use of the TBS with Finnish teachers.

The six factors that emerged during the factor analyses do not all correspond directly to NAEYC dimensions (i.e. curriculum, assessment, teaching strategies, parent-teacher relationship, and community and social development). At times, the factors were more general and could be seen as fitting into more than one category. Also, the factor structure established in this study is not identical to the structure established in Charlesworth's et al. study (1993).

Table 3. Factor Structure, Eigenvalues, and Cronbach's Alpha for the Teacher Beliefs Scale.

	Learning I	Activities and Materials II	Integrated Curriculum Beliefs III	Social IV	Community V	Literacy VI
I. Inappropriate Learning						
26 (punishments and reprimands)	0.79					
29 (colors within lines)	0.77					
28 (recognizing alphabet)	0.76					
13 (separate subjects, separate times)	0.74					
23 (whole group)	0.65					
25 (tangible rewards)	0.64					
II. Inappropriate Activities and Materials						
8 (standardized tests)		0.77				
21 (flashcards)		0.74				
20 (workbook/worksheets)		0.72				
10 (worksheets as assessment)		0.69				
22 (basal reader)		0.68				
III. Appropriate Integrated Curr. Beliefs						
41 (multicultural and gender neutral)			0.69			
40 (health and safety)			0.68			
43 (parent input)			0.67			
24 (teacher as facilitator)			0.64			
33 (see and use functional print)			0.62			
11 (individual differences in interests)			0.52			
18 (active exploration)			0.43			
IV. Appropriate Social						
19 (learning through peer interaction)				0.82		
14 (self-esteem)				0.60		
35 (talks informally with adults)				0.58		
15 (selects own activity)				0.51		
12 (individual differences in development)				0.48		
V. Appropriate Community						
27 (establishing rules)					0.77	
34 (dramatic play)					0.66	
32 (child dictates stories)					0.50	
VI. Inappropriate Literacy						
38 (learn to read)						0.68
30 (prints letters)						0.52
Eigenvalue	7.60	4.91	3.39	2.44	1.94	1.87
Cronbach's Alpha	0.79	0.79	0.78	0.78	0.77	0.74

7.3.2 Instructional Activities Scale

Factor analyses for the IAS used the principal components analysis, which produced six reliable factors all with eigenvalues over one and each factor accounting for over 5% of item variance (Table 4). Total item variance accounted for with these six factors was 60.2%. Varimax rotation produced moderate to high item loadings (.47 to .85) on the six factors. Two factors included inappropriate activities and four factors included appropriate activities. Subscale reliability of these six factors was calculated using Cronbach's alpha yielding moderate to high internal consistency of the designated factors. The relatively high internal consistency would support future use of the IAS among Finnish teachers.

As with the TBS, the IAS factor structure does not match with a one-to-one correspondence to the predetermined NAEYC guidelines. The factors do correspond to more general principles of NAEYC's position as well as corresponding at times directly to one of the five predetermined dimensions.

Table 4. Factor Structure, Eigenvalues, and Cronbach's Alpha for the Instructional Activities Scale.

	Activities I	Integrated Curriculum Practices II	Learning Materials III	Child- Initiated Learning IV	Physical V	Teaching Strategies VI
I. Inappropriate Learning Activities						
58 (flashcards)	0.78					
59 (rote counting)	0.75					
73 (competitive math)	0.68					
62 (copying from chalkboard)	0.67					
61 (reciting alphabet)	0.66					
55 (coloring/cutting predrawn forms)	0.60					
II. Appropriate Integrated Curr. Practices						
53 (cutting own shapes)		0.80				
51 (singing)		0.78				
74 (health and safety)		0.71				
72 (multicultural and gender neutral)		0.66				
48 (creative writing)		0.50				
III. Appropriate Learning Materials						
54 (manipulatives)			0.67			
44 (blocks)			0.60			
49 (games and puzzles)			0.60			
IV. Child-Initiated Learning						
65 (own activities in centers)				0.85		
50 (exploring animals, plants, machines)				0.72		
45 (child selects centers)				0.63		
46 (dramatic play)				0.58		
V. Appropriate Physical Activities						
71 (planned outdoor)					0.72	
52 (creative movement)					0.49	
VI. Inappropriate Teaching Strategies						
64 (large group instruction)						0.68
60 (handwriting on lines)						0.48
63 (waiting while others finish)						0.47
56 (ability level reading)						0.47
Eigenvalue	6.07	3.80	3.37	2.50	2.19	1.94
Cronbach's Alpha	0.81	0.81	0.80	0.80	0.79	0.80

7.4 Relationships between Beliefs and Reported Practices

Factor scores were summed for developmentally appropriate factors (e.g., developmentally appropriate integrated curriculum, developmentally appropriate social) separately for beliefs and practices. Factor scores were also summed for developmentally inappropriate

factors (e.g., inappropriate learning, inappropriate teaching strategies) for both beliefs and practices (see Tables 3 and 4 for factor titles). Four new summary measures were produced (developmentally appropriate beliefs and practice and developmentally inappropriate beliefs and practices) that could then be used to analyze correlation between appropriate beliefs and practices as well as inappropriate beliefs and practices.

The Pearson correlation coefficient was used to analyze correlation of appropriate beliefs and appropriate practices separately for American teachers and Finnish teachers (Table 5). The analysis indicated that American teachers' appropriate beliefs correlated significantly with their reported appropriate practices ($r = .673$, $p = .001$). Finnish teachers' appropriate beliefs were not correlated with their reported appropriate practices ($r = -.315$, $p = .253$). A strong correlation was found between inappropriate beliefs and inappropriate practices for both Finnish and American teachers (Table 6). American teachers' inappropriate beliefs and inappropriate practices correlation was $r = .719$ ($p = .000$). Correlation of inappropriate beliefs and inappropriate practices for Finnish teachers was $r = .796$ ($p = .000$). These results add to the existing data that suggest teachers practice more in line with their inappropriate beliefs than their appropriate beliefs (Charlesworth et al., 1993).

Table 5. Pearson Correlation of Appropriate Beliefs and Appropriate Practice by Country.

	USA	FIN
<i>r</i>	0.673	-0.315
<i>p</i>	0.001**	0.253

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 6. Pearson Correlation of Inappropriate Beliefs and Inappropriate Practice by Country.

	USA	FIN
<i>r</i>	0.719	0.796
<i>p</i>	0.000***	0.000***

* $p < .05$. ** $p < .01$. *** $p < .001$

7.5 Relationships between Background Characteristics and Appropriate and Inappropriate Factors

Three background characteristics were elicited from teachers and compared by country (Table 7). The resulting output gave a clearer representation of significant differences between the Finnish and American population. The American classrooms in this sample had significantly more children than the Finnish classrooms. American teachers had

significantly more first grade teaching experience and the Finnish teachers had significantly higher levels of education than the American teachers.

Table 7. Background Characteristics by Country.

	USA (n=23)		FIN (n=17)		<i>p(t)</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Class size	2.96	0.367	2.12	0.857	0.001**
Teaching Experience (first grade)	3.22	1.704	1.59	1.121	0.001**
Education level	2.61	0.722	3.06	0.243	0.009**

Note: Bold text indicates the higher value. * $p < .05$. ** $p < .01$. *** $p < .001$. n.s. = no significance.

Class size was scaled to NAEYC guidelines. 1= “ ≤ 15 ”; 2= “16-18”; 3= “19-25”; 4= “ ≥ 26 ”.

Teaching experience scaled at 5 year increments. 1= “0-4”; 2= “5-9”; 3= “10-14”; 4= “15-19”; 5= “20-24”; 6= “25-29”.

Education level. 1= less than a Bachelor’s Degree; 2= Bachelor’s Degree; 3= Master’s Degree; 4= more than a Master’s Degree.

Following the descriptive analysis by country, a correlation analysis was conducted using the unified sample of Finnish and American teachers (Table 8). Correlation analyses were run first between background characteristics (teacher and classroom characteristics) and the summary measures of appropriate and inappropriate beliefs and practice. No correlation was found. Correlation analyses were then run between the background characteristics and all 12 factors produced in the factor analysis.

Higher level of education was the only background factor to be related solely to appropriate dimensions of beliefs and practices. It correlated positively with appropriate beliefs about community development and negatively with inappropriate learning activities. From these results, it seems that education does play a partial role in improving the appropriateness of beliefs and practices.

Teaching experience, in this study, was only related to beliefs and not practices. It correlated positively with inappropriate literacy beliefs. However, it correlated negatively with inappropriate beliefs about activities and materials. These results give a relatively unclear picture of the relationship between teaching experience and appropriate and inappropriate dimensions of NAEYC’s statement. This lack of clarity could be evidence of a paradox that Buchanan et al. (1998) mentioned. Teachers have beliefs that are labeled appropriate and inappropriate and may act on those beliefs in different situations. In this

case, it may be that experience has taught teachers that focusing on specific literacy skills is the first step to ensuring reading success in first grade. NAEYC's position would be in opposition to a first grade reading program that only focuses on specific reading skills. However, the revised position clearly allows for a program that blends specific skill training (known as a phonics approach) with whole-language learning (methods that focus on using language and literacy in their many different and authentic forms) (Bredenkamp & Copple, 1997).

The single classroom characteristic of class size correlated positively to four factors. Larger class size correlated to more appropriate beliefs about integrated curriculum and more inappropriate beliefs about literacy. It also correlated positively to using more appropriate integrated curriculum and more inappropriate learning activities. These results also seem unclear and again present a paradox. Perhaps teachers in this sample who had more children in their classrooms found times when integrating the curriculum was more beneficial and other situations when traditional activities were more appropriate. It is difficult to suggest any reliable explanations since classroom observation was not conducted.

Table 8. Pearson Correlation between background characteristics and Appropriate/Inappropriate Factors.

	Inappropriate Activities and Materials Beliefs	Appropriate Integrated Curr. Beliefs	Appropriate Community Beliefs	Inappropriate Literacy Beliefs	Inappropriate Learning Activities	Appropriate Integrated Curr. Practices
Education Level						
<i>r</i>			0.460		-0.385	
<i>p</i>	n.s.	n.s.	0.005**	n.s.	0.015*	n.s.
Teaching Experience (first grade)						
<i>r</i>	-0.398			0.336		
<i>p</i>	0.016*	n.s.	n.s.	0.045*	n.s.	n.s.
Class Size						
<i>r</i>		0.511		0.473	0.359	0.446
<i>p</i>	n.s.	0.001**	n.s.	0.004**	0.025*	0.004**

Note: Factors that did not correlate with any of the background characteristics were not included in the table.
* $p < .05$. ** $p < .01$. *** $p < .001$. n.s. = no significance.

7.6 Influence on Teachers' Classroom Practice

Teachers responded to seven factors that had possible influence over their planning and implementation of instruction. Descriptive analyses and t-tests were conducted in order to highlight any perceived differences in influence between Finnish and American teachers (Table 9).

Finnish and American teachers agreed that government regulations, curriculum, and themselves had the most influence over the way they planned and implemented instruction. This is noteworthy if one wishes to improve classroom practices. American teachers indicated they perceived parents and the school board as having significantly more influence on their teaching than Finnish teachers perceived. American and Finnish teachers also differed moderately on their perceptions of principal and colleague influence. These findings could be the results of more local control within the American educational system. This will be discussed in section 8.2.6.

Table 9. Influence on Teachers' Classroom Practices by Country.

	USA		FIN		<i>p(t)</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Parents	3.39	1.08	2.24	0.83	0.001**
Curriculum	4.52	0.67	4.35	0.61	n.s.
Principal	2.74	1.18	1.94	0.66	0.010*
Teacher (self)	4.78	0.42	4.88	0.33	n.s.
Government	4.00	0.91	4.18	0.73	n.s.
Colleagues	3.45	0.86	2.82	0.81	0.025*
School Board	2.70	1.15	1.65	0.70	0.001**

Note: Bold text indicates the higher value. * $p < .05$. ** $p < .01$. *** $p < .001$. n.s. = no significance

8 DISCUSSION

8.1 Purpose and Methods of this Study

This study examined the differences and similarities of beliefs and practices between first grade teachers in Finland and the United States. It also described dimensions of those beliefs and practices. After beliefs and practices had been examined, relationships between the two were investigated. Studying teachers' beliefs is important if we want to understand teachers' thinking and thus their classroom practices. The relationship between beliefs and practices is complex with regard to the extent one affects the other. In addition to beliefs and practices affecting one another, there are background characteristics of teachers and their classrooms that may play a role in teachers' beliefs and practices. This study documented three background characteristics and examined them in relation to teachers' beliefs and practice. Finally, teachers reported how much influence seven items had on the way they planned and implemented instruction.

The current study examined beliefs and practices through the lens of NAEYC's position statement regarding developmentally appropriate practices in early childhood (Bredekamp & Copple, 1997). The position statement calls on teachers and others concerned with the care and education of young children (defined as birth through eight years old by NAEYC) to provide children with an environment that encourages them to initiate much of their own learning. The statement outlines dimensions of developmental appropriateness including assessment, curriculum, teaching strategies, community and social development, family-school relationships, and policies. Through appropriateness in these key areas, those advocating for developmentally appropriate practice believe that children's cognitive and social development will be enhanced.

In addition to examining beliefs and practices in relation to NAEYC's position, beliefs and practices were compared between Finnish and American respondents. By comparing beliefs and practices cross-culturally, assumptions held in either country have the opportunity to be challenged. The question of why certain differences exist can be examined in larger cultural and political contexts.

Data for this study were gathered using a slightly modified version of the Teacher Questionnaire: Primary Version (Burts, Charlesworth, Hart, 1992). The questionnaire consisted of the Teacher Beliefs Scale and Instructional Activities Scale. Additionally, it

questioned teachers on the amount of influence certain items had on their teaching. Finally, teachers reported background characteristics of themselves and their classrooms.

Teachers reported their own beliefs and practices on a five-point scale that allowed for degrees of agreement or disagreement with the statement being considered. This method is seen as being more accurate than asking teachers to simply report yes/no or agree/disagree to belief statements since beliefs tend to fall along a continuum. The psychometric properties of the questionnaire were found to be relatively good in the unified Finnish/American sample. The factors were relatively strong and fit logically with NAEYC guidelines. This would tend to support the future use of this questionnaire in Finland and the United States. The factors found in this study are, however, slightly different from the factors found in Charlesworth's et al. (1993) study.

Ascertaining teachers' beliefs via a questionnaire is a method most practical when sampling large populations. A fuller description and understanding of pedagogical beliefs would involve additional methods of data collection. Most of the studies examining teachers' beliefs and practices regarding developmentally appropriate practice have used quantitative techniques involving some use of questionnaires. At least one study (Goldstein, 1997) has used qualitative methods. In order to conduct research in line with and comparable to previous studies, a quantitative approach using a questionnaire was taken.

Caution needs to be exercised when considering teachers' responses on the Instructional Activities Scale. These are, after all, only reported practices. To truly document classroom practices, observation is crucial. Previous research regarding DAP has shown that reported practices and observed practices are not one in the same. They are, however, related to one another. Primarily because of language barriers, observation was not used in this study.

8.2 Summary of Results

8.2.1 Beliefs about classroom practice

Finnish and American first grade teachers maintained many similar beliefs about classroom practice. Both groups believed more strongly in developmentally appropriate practice than in inappropriate practice. However, when differences appeared American

teachers' beliefs were more appropriate than Finnish teachers' beliefs about developmentally appropriate classroom practice.

What could explain Americans seemingly stronger commitment to developmentally appropriate practice? First, consideration should be given to the fact that the entire concept of developmentally appropriate practice and the organization that first published a position statement about DAP both originate in the United States. It is possible that American teachers are more familiar with the ideals professed and language used by NAEYC and thus responded in ways more congruent with NAEYC's position. This explanation cannot account entirely for the way American teachers responded since they clearly did respond less appropriately and even inappropriately at times.

A second possible explanation lies in Finnish and American conceptions of early childhood. NAEYC defines early childhood as birth through age eight. While NAEYC does not dictate public policy in the United States, it does play an advisory role to those who do decide on regulations and policy regarding early childhood education and care. The concept of early childhood lasting through eight years old or approximately third grade is one that could be applied generally to the U.S. context.

Finland, on the other hand, could be seen as having a slightly different conception of early childhood. In Finland the idea of early childhood could be seen as the years from birth through age six at which time compulsory school begins (OECD 2001). However, there have been recent suggestions that early childhood in Finland is also from birth through age eight (see Husa & Kinos, 2005). Whether or not early childhood professionals have internalized this conception is unknown.

The difference between the birth through six conception and birth through eight conception is that one includes school aged children (up through grade three) and one does not. It could be that if American first grade teachers conceptualize early childhood as lasting through the age of eight, they might believe more in the use of developmentally appropriate methods for young children in their first grade classrooms. If Finnish first grade teachers conceptualize early childhood as being wrapped-up by the age of seven, they may be more apt to maintain more traditional beliefs about teaching in first grade classrooms.

One final possible explanation concerns itself with the cultures of Finland and the United States. In 1900 Michael Sadler stated, “In studying foreign systems of education we should not forget that the things outside the schools matter even more than the things inside the schools...All good and true education is an expression of national life and character,” (see Alexander, 2000, 27). If Sadler was right in 1900 and if this statement holds true today, then how do culture and politics affect Finnish and American education, specifically teachers’ beliefs? Is the mentality connected to the decentralized nature of American government conducive to pedagogical beliefs that are more in line with ideas of individual appropriateness, one of the cornerstones of NAEYC’s position? Does the American faith in “rugged individualism” contribute to beliefs in individual appropriateness? What about Finnish and American populations? Does a relatively more homogeneous Finnish population contribute to believing in more homogeneous teaching practices, something considered inappropriate by NAEYC? Does the diversity of America’s population make the argument for varied teaching styles easier in the United States? These ideas are tentative at best. They are however, worth consideration if Sadler’s view from a century ago holds any weight now.

This study also found relationships between high numbers of children in the classroom and appropriate beliefs about integrated curriculum. The fact that American classrooms in this study had more children could explain some of their more appropriate beliefs. Also, more first grade teaching experience was related to fewer inappropriate beliefs about activities and materials. American teachers’ experience could explain some of their more appropriate beliefs as well.

8.2.2 Classroom practices

American teachers reported using more appropriate practices than Finnish teachers. Finnish teachers, however, reported using fewer inappropriate practices than American teachers. Both of these findings indicate more appropriateness at times by American teachers and at other times by Finnish teachers. Both the American and Finnish samples seem to provide evidence of what Buchanan et al. (1998) described as a paradox and Bredekamp and Copple (1997) described as both/and thinking. Teachers, in their very practical classroom work, seem to use a combination of practices labeled as appropriate and inappropriate. This idea is one of the principal additions to the 1997 NAEYC revision. Because the teacher is a decision-maker, it is her responsibility to consider each practice

employed in the classroom and its appropriateness in a particular context and for a particular child or group of children.

While both Finnish and American teachers reported using both appropriate and inappropriate activities, the American teachers reported using more of both and the Finnish teachers reported using less of each. One explanation for this difference could be that the Finnish first grade school day is shorter than the American school day. In Finland the average school day is between three and a half and four hours (Eurydice Database on Education, 2003). In Minnesota and Washington the average school day was five and a half hours (Minnesota Statute 120A.41/2003, Revised Code of Washington 28A.150.220/1993). The American teachers in this sample may have more time to do more appropriate and inappropriate activities while the Finnish teachers do not.

In this study higher education level was related to reporting fewer inappropriate learning activities. Maxwell et al. (2001) also reported that education level was related to classroom practice. Because the Finnish sample had higher levels of education, this could explain, in part, Finnish teachers reporting the use of fewer inappropriate practices. Larger class size was related to reporting more use of inappropriate learning activities in this study. Buchanan et al. (1998) also found relationships between higher numbers of children in the classroom and inappropriate practices. American classrooms in this study were larger than Finnish classrooms, which could explain American teachers' tendency to use more inappropriate practices.

8.2.3 Dimensions of beliefs and practice

Six factors emerged among beliefs and six emerged among practices. The factors described both appropriate and inappropriate dimensions of NAEYC's statement on DAP and generally corresponded to NAEYC guidelines.

8.2.4 Relationships between beliefs and practice

American teachers' appropriate beliefs were related to their appropriate practices, while Finnish teachers' were not. To attempt to explain this, consideration can again be given to the possibility that American teachers in this study were more familiar with the basic precepts of DAP and therefore responded both on the TBS and IAS with what they thought were more "correct" answers.

Both Finnish and American teachers' inappropriate beliefs were closely connected to their inappropriate practices. It could be that inappropriate items, whether they are beliefs or practices, are items that teachers are more confident about and therefore when they profess it, they practice it. This close relationship could also be due to the fact that inappropriate beliefs and practices fit more readily into the existing school structures.

While appropriate beliefs and practices were related among the American sample (and not at all related among the Finnish sample) they were not as closely related as inappropriate beliefs and practice. Is this an indication that teachers are not as confident about their appropriate beliefs? Is it because they struggle with implementation of those appropriate beliefs? Discussion of these questions will be considered later in relation to previous studies (section 8.4).

8.2.5 Background characteristics

This study also examined education level, class size, and first grade teaching experience in relation to reported beliefs and practices. While no relationships were found between the background characteristics and summary measures of appropriate beliefs and practices and inappropriate beliefs and practices, several relationships were found between background characteristics and individual appropriate and inappropriate factors. However, only education level was related solely to appropriate dimensions of beliefs and practice.

8.2.6 Influences on teachers

Finnish and American teachers all agreed government regulations, curriculum, and themselves as teachers had relatively high amounts of influence on how they planned and implemented curriculum. If their perceptions are accurate, then it is, perhaps, these three

entities that policy makers, researchers, and teachers themselves should focus on in order to achieve any desired change in classroom practice.

The other four influence items about which teachers were questioned included parents, colleagues, the school principal, and the local school board. Americans perceived all four of these entities as having more influence on their teaching than what Finnish teachers perceived. All of these people are local people. Colleagues and principals tend to work in the same building as the queried teachers, parents entrust their child's education to the teacher, and the school board is the local authority responsible for managing all the schools in the local school district. Again, we should consider cultural and/or political differences between the United States and Finland when asking ourselves why American teachers perceived these four entities as having more influence on their teaching than Finnish teachers perceived. Education in the United States is historically and legally controlled at the state and local levels. Alexander (2000, 103) notes that local accountability in the United States is a "prominent feature" due to small school districts, local funding (approximately half coming from the individual state and the other half coming from local taxes), and elected educational officials instead of appointed. A community member's comment in a rural Minnesota newspaper reflects the local nature of educational funding. "It was my community that paid for my education, [it] has been that way for generations, and now it is my turn," (Trosvig, 2005). It seems logical that teachers working in this context would be more sensitive to local attitudes and thinking toward education. Perhaps this also indicates that anyone advocating for improved classroom practices in the United States needs also to address the public on a local level. Educating the general public on what research has found about child development and best practices could help the process of improving classroom practice. While national discourse tends to be highly political, local discussions rooted in scientific findings could be more productive.

Finnish teachers' responses to the items of influence seem to suggest that a more centralized system of education, like that in Finland, could reduce the number of variables that influence teachers' practices, making it easier to influence teachers' practice simply because there are fewer items on which to focus.

8.3 Limitations

There are several limitations to the findings of this study. First, the sample size is small since one goal of the study was to test the usability of The Teacher Questionnaire: Primary Version in Finland. The Teacher Questionnaire seems to be usable in the Finnish context and could be a valuable tool for further research among Finnish primary grade teachers. Secondly, the two independent samples do not include the variety of school contexts that exist in Finland and the United States. Due to the non-representative nature of the sample, the small sample size, and the low response rate among Finnish teachers, the external validity of this study could be described as relatively low. Third, classroom practices were self-reported. A more accurate understanding of classroom practices would be improved by classroom observations.

8.4 Connections to Previous Research

While reviewing research on DAP, no studies were found comparing Finnish and American first grade teachers' beliefs and practices in the context of NAEYC's position. There has been one study, however, that compared Finnish and American preschool teachers' beliefs about developmentally appropriate practices (Hoot et al., 1996). The results of the present study support this previous study by demonstrating that early childhood teachers in both countries believe relatively strongly in developmentally appropriate practice. Comparisons become more complex when consideration is given to the fact that teachers were working with different aged children. The studies also used different measurement tools.

The current study supports a number of studies finding that while teachers may believe in developmentally appropriate constructs, they do not necessarily practice in such a manner (Hatch & Freeman, 1988; Charlesworth et al., 1993; Vartuli, 1999; Goldstein, 1997). The reasons teachers did not teach in absolute accord with their beliefs varied according to the suggestions provided by the individual authors. At times, educational policies seemed a likely reason for teaching in a more didactic manner (Hatch & Freeman, 1988). In other studies, policies seemed to be in line with DAP constructs, but personal characteristics of the individual teacher seemed to inhibit full implementation of developmentally appropriate practice (Goldstein, 1997).

The relationship between inappropriate beliefs and practices was much stronger than the relationship between appropriate beliefs and practices in this study. A similar finding has been evidenced previously (Charlesworth et al. 1993). As noted earlier, this may be due to more confidence in certain inappropriate practices or due to more congruence between inappropriate practices and traditional school structures.

Two previous studies focused on the relationships between background characteristics and appropriate and inappropriate beliefs and practices. This study supports Maxwell's et al. (2001) finding that education level is related to classroom practices. However, while this study found a relationship between education level and appropriate beliefs about community, Maxwell's et al. study found little connection between education level and beliefs in general.

Buchanan et al. (1998) found that more teaching experience was somewhat related to developmentally appropriate constructs. This supports the current study's finding that more experience was related to less inappropriate beliefs about activities and materials. However, the present study also found a relationship between experience and stronger beliefs about inappropriate literacy.

Again, Buchanan et al. (1998) found that larger class sizes were related to developmentally inappropriate beliefs and practices. The current study found relationships between class size and inappropriate beliefs and practices but also found relationships with appropriate beliefs and practices. Clear trends between the current study and previous studies are not evident with regard to the selected background characteristics.

The results of this study show that teachers in both Finland and the United States perceived the curriculum, government policies, and themselves as teachers to have the most influence on classroom practice. Hoot et al. (1996) cite work (Charlesworth, Hart, Burts, & Hernandez, 1990; Charlesworth, 1991) that is supported by the current findings. The work cited by Hoot et al. found that teachers perceived that state (government) policies, themselves, and the school system had the most influence on the way they planned and implemented instruction. Taken together, these findings suggest that focus should be placed on government policies and teachers if influence on classroom practice is desired.

8.5 Application of Findings

This study first and foremost describes beliefs and practices of first grade teachers in Finland and the United States. Caution is necessary when considering these results due to the small and unrepresentative sample. However, some of the more basic trends found in this study have also been found previously.

From this study we see that there are differences between Finland and the United States regarding their beliefs about DAP, but that teachers in both countries hold beliefs that are more appropriate than inappropriate. We see that appropriate beliefs do not always lead to appropriate practices and that when beliefs are inappropriate, practices are more likely to be inappropriate.

This study can describe beliefs and practices, but it cannot place value on those beliefs and practices. While there are empirical data suggesting certain teaching methods over others, those concerned with early childhood education in each of these countries are ultimately responsible for placing value on the beliefs and practices held by teachers in their respective countries. Are these the beliefs that American teachers should hold and should they practice in this manner? Are these the beliefs that Finnish teachers should hold and should they practice in this manner? Of course, there is bound to be disagreement about what constitutes best practice in each country. However, if teachers, administrators, researchers, politicians, and parents decide that the current findings are not desirable, then what is desirable and how do we get there?

The second part of the findings cannot answer what is desired but can offer suggestions on how to reach any agreed upon destination. Out of the three background characteristics that were examined, education level was the only one to be related solely to appropriate dimensions of beliefs and practice. This would suggest that policies such as requiring a master's degree for all primary grade teachers might be wise if one wants to improve classroom practices. Such a policy is the case in Finland but is not in the United States.

Teachers' own perceptions of what influences their teaching can offer suggestions about how to proceed toward improved practices. Teachers' indicating that they themselves had influence over what happens in the classroom seems logical and is, perhaps, a good place to begin on the road to change. Looking at the previous finding regarding education, it

seems logical to start by ensuring that teachers are highly educated. Education level alone is not enough when considering previous studies. A number of studies show that training focused on specific teaching practices at the pre-service and in-service level is effective in helping teachers improve classroom practices. Previous research also suggests that specialized training in early childhood education instead of the more common elementary education is beneficial (Buchanan et al., 1998; Snider and Fu, 1990; Mangione and Maniates, 1993, see Dunn & Kontos, 1997).

Teachers also indicated that government policies had a high level of influence on their teaching. This suggests that early childhood professionals should make extra efforts to inform policy makers about best practices and policies that support those practices. It also suggests that advocacy on behalf of early childhood education within the political arena is beneficial. Despite government policies, studies exist showing that teachers may still struggle with implementing developmentally appropriate practices (Goldstein, 1997; Hatch & Freeman, 1988).

Teachers in this sample also indicated that the curriculum influenced their teaching. A study by Wood (2004) documents the changes in British early childhood teachers' thinking and practice due to the national curriculum. In Britain's case, tensions arose between teachers' professional knowledge of child development and a curriculum that was "prescriptive" in nature. In addition to the curriculum, Lattu (2003) suggests that investing in high quality teacher materials could affect the quality of classroom practice. He goes on to suggest that time structures within schools should also be rethought in order to better support child-centered curricula and teaching.

The curriculum is often decided on a school-wide, district-wide, and even state/nation-wide level. To affect the curriculum, we need to focus on decision-makers at those levels. At district and state/nation-wide levels, elected as well as appointed officials should be the focus of any efforts to influence curriculum decisions. At the school-wide level, principals and perhaps teachers themselves should be the focus.

8.6 Conclusions

This study found that teachers in both Finland and the United States had more developmentally appropriate beliefs than inappropriate beliefs. However, American

respondents reported more appropriate beliefs than Finnish respondents. Several possible reasons for this were suggested. First, American teachers may be more familiar with DAP concepts and therefore responded in a way they felt was “correct.” Second, it is possible that conceptions of early childhood differ slightly between the two countries. Third, considering cultural and political differences between Finland and the United States could help to explain some of the differences in teachers’ responses regarding developmentally appropriate practices.

Relationships between class size and appropriate beliefs about curriculum found in this study could help to explain American teachers’ stronger beliefs in DAP. Also, the relationships found between teaching experience and fewer inappropriate beliefs about activities and materials could explain some of American teachers’ more appropriate beliefs.

American teachers reported using more appropriate activities than Finnish teachers while Finnish teachers reported using fewer inappropriate activities than American teachers. These findings indicate that at times both groups are more appropriate than the other. One possible explanation for this is the shorter teaching day in Finnish first grade classrooms. Also, higher levels of education were related to reporting the use of fewer inappropriate activities and materials in this sample. This could help to explain Finnish teachers reporting the use of fewer inappropriate activities and materials since the Finnish sample had a higher level of education. American class sizes were larger. The relationship between class size and activities in this study could help explain American teachers reporting the use of more inappropriate activities.

The psychometric properties of the questionnaire appear to be fairly good when used with both Finnish and American teachers. This would justify the future use of The Teacher Questionnaire among Finnish and American teachers. Six belief dimensions and six activity dimensions emerged while analyzing the questionnaire responses that help us to understand overall conceptions of DAP that exist.

Strong relationships between inappropriate beliefs and practices were found in both the Finnish and American samples. A weaker relationship between appropriate beliefs and

practices was found in the American sample and no relationship between appropriate beliefs and practices was found in the Finnish sample.

Background characteristics were examined in this study and found to be related to a number of developmentally appropriate and inappropriate factors. No clear picture of the relationships between the background characteristics and appropriate and inappropriate beliefs and practices could be found. However, of the three background characteristics, only education level was positively related to more appropriate dimensions of developmentally appropriate practice.

Finnish and American teachers agreed that they (as teachers), the curriculum, and government policies had the most influence over the way they teach. When considering how to influence classroom practices in either nation, these three entities should be considered. American teachers' perceived parents, colleagues, principals, and the school board as having more influence than what Finnish teachers perceived. This could reflect the more localized nature of American education.

NAEYC's position statement on developmentally appropriate practice provides a high standard for gauging the quality of early childhood curriculum and teaching practices. It was not written to dictate practice but to guide practice. Teachers in both Finland and the United States can examine the principles included in NAEYC's position and apply them appropriately to their varying cultural contexts.

The debate over best practices for the early childhood classroom will and should continue. It is important that all of those involved in the debate remain focused on what is best for both the child's cognitive and social as well as physical and emotional development. Children with academic skills and no desire to apply them will not succeed in school. Children with social skills but lacking basic literacy and numeracy skills will also struggle. Both are necessary. Balance is paramount. The whole child can be educated; his development can be supported. In order to support the child throughout his formal education, teachers need to be supported. Pre-service and in-service training needs to give teachers the methodological tools necessary to guide children's growth. However, in addition to developing the teacher's skills, an environment that is conducive to appropriate practices is necessary. Administrators and policy makers must understand the true nature

of the young child in order to support appropriate policies in the early childhood classroom.

Comparisons between countries, between education systems, and between the students those systems educate or fail to educate will continue. Many of these comparisons take the form of standardized tests that quantify the knowledge of a child on one particular day. We need to move from valuing test results and quantified knowledge to valuing the children we test. We need policies that reflect these values. In his condemnation of test-oriented education, David Elkind (1981, 56) cites the words of Kenneth Kenniston:

We measure the success of schools not by the kinds of human beings they promote but by whatever increases in reading scores they chalk up. We have allowed quantitative standards, so central to the adult economic system, to become the principal yardstick for our definition of our children's worth.

If we truly believe that young children are the future, we need to do everything possible to ensure the future is bright.

8.7 Areas for Further Research

Any future research on DAP in the United States or in Finland needs to include classroom observation. Reported practices provide insight, but do not capture the complete picture of what is happening in the classroom.

A number of classroom observation tools exist. Some of them are designed to investigate more general aspects of didactic and child-centered classroom activities, while others have been designed to check specifically for dimensions of DAP as defined by NAEYC. Additionally, some have focused on preschool and kindergarten classrooms and others on first through third grade classrooms (Lee Van Horn & Ramey, 2004). Two tools that have been designed for primary classrooms and specifically address DAP are the Assessment of Practices in Early Elementary Classrooms (APEEC, Maxwell et al., 2001) and A Developmentally Appropriate Practices Template (ADAPT, Lee Van Horn & Ramey, 2004). Either of these tools would provide a foundation for classroom observation that focuses on DAP.

Continuing to document the existence of child-centered approaches in primary education and their effects on later academic achievement and social development is important.

However, research needs to expand beyond documenting the “what” to considering the “how.” Some research has looked at teachers’ pre-service training (Buchanan et al., 1998; Snider and Fu, 1990) and some has focused on in-service training (Mangione and Maniates, 1993, see Dunn & Kontos, 1997). Lattu’s (2003) study is one good example of generating ideas about how to affect classroom practices. While both pre-service and in-service training are likely places to affect practices, what are the specific strategies that get results? What are the policies that support appropriate practices? How can these strategies and policies be implemented more widely in order to achieve appropriate classroom practices?

Further research between Finland and the United States should be cooperative as well as comparative. Researchers from both countries should collaborate in order to document classroom practices with greater accuracy and to provide more balanced analyses of beliefs and classroom practices. I have tried to remain objective while considering the results of this study. However, bias is inherent in any one person’s interpretation of data. My interpretation of results could be different from another’s. Involving individuals from both nations of study would provide more balance in interpretation.

Comparative studies provide insights that challenge assumptions and highlight unique characteristics of the countries they study. Further studies between Finland and other countries as well as between the United States and other countries would add to the knowledge that already exists about each country’s educational system. The United States is a country that is commonly compared to other nations on many fronts, while Finland has been compared less. This, of course, is not surprising for a number of reasons. Regardless of country, nations need to continue to look beyond their own borders in order to answer questions within their borders.

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APPENDICES

Appendix 1

OPETTAJIEN KYSELYLOMAKE

Määritä minkä verran kukin seuraavista tekijöistä vaikuttaa tapaasi suunnitella ja toteuttaa opetusta (ympyröi sopivin vaihtoehto).

1	2	3	4	5
Erittäin vähän vaikutusta		Kohtuullisesti vaikutusta		Erittäin paljon vaikutusta
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Määritä mitkä seuraavista ovat mielestäsi tärkeimpiä asioita ensimmäistä luokkaa opetettaessa (ympyröi sopivin vaihtoehto).

1	2	3	4	5
Ei yhtään tärkeä	Ei kovin tärkeä	Jokseenkin tärkeä	Varsin tärkeä	Erittäin tärkeä
8.				
9.				
10.				
11.				

12. On _____, että ensimmäisen luokan toiminnot vastaavat oppilaiden yksilöllisiä kehitystasoja. 1 2 3 4 5
13. On _____, että kukin lukujärjestyksen osa-alue opetetaan omalla oppiaineellaan omalla ajankohdallaan. 1 2 3 4 5
14. On _____, että alaluokilla opettajan ja oppilaan väliset vuorovaikutustilanteet auttavat kehittämään lasten itsetuntoa ja lisäämään myönteisiä oppimiskokemuksia. 1 2 3 4 5
15. On _____, että oppilaille voivat valita toimintonsa opettajien ennalta valmistamien oppimiskokemusten joukosta (rakentelu, luonto- ja ympäristötieto, kieli, matematiikka, jne.). 1 2 3 4 5
16. On _____, että oppilaille annetaan mahdollisuus itse keksiä, suunnitella ja toteuttaa omat toimintonsa (esim. leikata haluamiaan muotoja paperista, suorittaa itse omaan tahtiin tieteellisiä kokeita, suunnitella itse omia luovia näytelmiä, taidetta ja kirjoitustehtäviä). 1 2 3 4 5
17. On _____, että oppilaat työskentelevät hiljaa paikoillaan. 1 2 3 4 5
18. On _____, että ensimmäisen luokan oppilaat oppivat aktiivisen tutkimisen kautta. 1 2 3 4 5
19. On _____, että ensimmäisen luokan oppilaat oppivat vuorovaikutuksessa muiden lasten kanssa. 1 2 3 4 5
20. Työkirjat ja/tai tehtäväpaperit ovat _____ ensimmäisellä luokalla. 1 2 3 4 5
21. Kuva- tai muistikortit (numerot, kirjaimet ja/tai sanat) ovat ensimmäisellä luokalla opetuskäytössä _____. 1 2 3 4 5
22. Aapinen on ensimmäisellä luokalla lukemaan opettamisessa _____. 1 2 3 4 5
23. Opetuksen vaikuttavuuden kannalta on _____, että opettaja puhuu koko ryhmälle ja varmistaa, että kaikki osallistuvat samaan toimintaan. 1 2 3 4 5
24. Opetuksen vaikuttavuuden kannalta on _____, että opettaja liikkuu ryhmien ja yksilöiden luona tarjoten ehdotuksia, kysyen kysymyksiä ja edistäen lapsien toimintaa opetusmateriaalien ja toimintojen kanssa. 1 2 3 4 5

25. On _____, että opettaja rohkaisee sopivaa/toivottua käytöstä palkkioiden avulla. 1 2 3 4 5
26. On _____, että opettaja käyttää rangaistuksia ja nuhtelua rohkaistakseen toivottua käytöstä. 1 2 3 4 5
27. On _____, että oppilaat ovat mukana päättämässä luokan säännöistä. 1 2 3 4 5
28. On _____, että oppilaita lukemaan ja kirjoittamaan opetettaessa opetetaan tunnistamaan ensin aakkoset. 1 2 3 4 5
29. On _____, että oppilaat värittävät viivojen sisällä. 1 2 3 4 5
30. On _____, että ensimmäisen luokan oppilaat kirjoittavat viivastolle. 1 2 3 4 5
31. On _____, että oppilaille luetaan satuja tai tarinoita yksilöllisesti ja/tai ryhmissä. 1 2 3 4 5
32. On _____, että oppilaat sanelevat satuja tai tarinoita opettajalle. 1 2 3 4 5
33. On _____, että ensimmäisen luokan oppilaat näkevät ja käyttävät hyväkseen arkipäiväisiä välineitä, (puhelinluettelot, aikakauslehdet, jne.) ja välineitä, joita he näkevät (murolaatikot, maitotölkit, jne.) päivittäin. 1 2 3 4 5
34. On _____, että lapset saavat mahdollisuuden oppia pedagogisen draaman tai leikin avulla. 1 2 3 4 5
35. On _____, että lapset keskustelevat aikuisten kanssa luontevasti, eivätkä esim. teitittele. 1 2 3 4 5
36. On _____, että lapset kokeilevat kirjoittamista leikkikirjoituksen avulla. 1 2 3 4 5
37. On _____, että luokkatilanteessa tarjotaan paljon mahdollisuuksia sosiaalisten taitojen kehittämiseen ikätovereiden kanssa. 1 2 3 4 5
38. On _____, että ensimmäisen luokan oppilaat oppivat lukemaan. 1 2 3 4 5
39. Ensimmäisellä luokalla on _____, että matematiikka integroidaan muiden aineiden yhteyteen. 1 2 3 4 5
40. Kun opetetaan terveyteen ja turvallisuuteen 1 2 3 4 5

liittyviä asioita on _____, että
 lukuvuoden aikana on useita erilaisia aiheeseen
 liittyviä toimintoja.

- | | | | | | |
|---|---|---|---|---|---|
| 41. Luokkatilanteessa on _____, että lapsi saa monikulttuurisia ja sukupuolten välistä tasa-arvoa edistäviä virikkeitä tai malleja. | 1 | 2 | 3 | 4 | 5 |
| 42. On _____, että välitunti on suunniteltua toimintaa. | 1 | 2 | 3 | 4 | 5 |
| 43. Vanhemmilta saadut ideat, ehdotukset ja mielipiteet ovat oppimisen kannalta _____. | 1 | 2 | 3 | 4 | 5 |

Määritä miten usein oppilaasi keskimäärin osallistuvat seuraaviin toimintoihin (ympyröi sopivin vaihtoehto).

- | 1 | 2 | 3 | 4 | 5 | |
|--|-------------------------|--------------------------|---------------------------------------|-----------------------------|---|
| Ei juuri koskaan (vähemmän kuin kerran kuussa) | Harvoin (kerran kuussa) | Joskus (kerran viikossa) | Säännöllisesti (2-4 kertaan viikossa) | Erittäin usein (päivittäin) | |
| 44. leikkivät rakennuspalikoilla | 1 | 2 | 3 | 4 | 5 |
| 45. oppilaat työskentelevät avoimessa oppimisympäristössä | 1 | 2 | 3 | 4 | 5 |
| 46. osallistuvat leikkeihin ja/tai pedagogiseen draamaan | 1 | 2 | 3 | 4 | 5 |
| 47. kuuntelevat CD-levyjä ja/tai kasetteja | 1 | 2 | 3 | 4 | 5 |
| 48. harjoittavat luovaa kirjoittamista tai leikkikirjoittamista (yhdistelemällä symboleja, keksimällä sanoja ja piirtämällä) | 1 | 2 | 3 | 4 | 5 |
| 49. pelaavat pelejä ja leikkivät palapeleillä | 1 | 2 | 3 | 4 | 5 |
| 50. tutkivat eläimiä, kasveja, ja/tai kulkuvälineitä | 1 | 2 | 3 | 4 | 5 |
| 51. laulavat ja/tai kuuntelevat musiikkia | 1 | 2 | 3 | 4 | 5 |
| 52. harrastavat luovaa liikkumista | 1 | 2 | 3 | 4 | 5 |
| 53. leikkaavat paperista haluamiaan muotoja | 1 | 2 | 3 | 4 | 5 |
| 54. leikkivät palapeleillä, tai Legoilla tai rakennuspalikoilla | 1 | 2 | 3 | 4 | 5 |
| 55. värittävät ja/tai leikkaavat etukäteen piirrettyjä muotoja | 1 | 2 | 3 | 4 | 5 |

56. lukevat lukutaitoaan vastaavissa tasoryhmissä	1	2	3	4	5
57. ympyröivät, alleviivaavat ja/tai kirjaavat asioita tehtäväpaperiin	1	2	3	4	5
58. käyttävät muistin apuna muistikortteja, joissa on tuttuja, lyhyitä sanoja ja/tai pieniä laskutoimituksia	1	2	3	4	5
59. luettelevat numeroita ulkomuistista	1	2	3	4	5
60. harjoittelevat käsialaa viivastolle	1	2	3	4	5
61. luettelevat aakkosia ääneen	1	2	3	4	5
62. kopioivat opettajan merkintöjä liitutaalulta	1	2	3	4	5
63. odottavat, että muut ovat valmiit	1	2	3	4	5
64. osallistuvat opettajan ohjaamaan opetukseen isoissa ryhmissä	1	2	3	4	5
65. Työskentelevät omatoimisesti eri opiskeluaiheissa	1	2	3	4	5
66. saavat konkreetteja palkkioita oikeanlaisesta käytöksestä ja/tai suorituksesta	1	2	3	4	5
67. menettävät etuja (matkat, välitunnit, vapaa-ajat, juhlat, jne.), jos käyttäytyvät huonosti	1	2	3	4	5
68. saavat sosiaalista vahvistusta (kehuja, hyväksyntää, huomiota, jne.) sopivasta käytöksestä ja/tai suorituksesta	1	2	3	4	5
69. heidät eristetään, (nurkassa tai huoneen ulkopuolella seisottaminen), jotta he tottelisivat tai myöntyisivät	1	2	3	4	5
70. Osallistuvat vanhempien ohjaamiin tai tekemiin peleihin tai toimintoihin	1	2	3	4	5
71. Osallistuvat erityisesti suunniteltuihin ulkoilutoimintoihin	1	2	3	4	5
72. Osallistuvat monikulttuurisiin ja sukupuolten välistä tasa-arvoa edistäviin toimintoihin	1	2	3	4	5
73. Osallistuvat kilpailuhenkisiin matemaattisiin toimintoihin, kun opiskellaan matematiikkaa	1	2	3	4	5
74. Osallistuvat terveyteen ja turvallisuuteen liittyviin toimintoihin	1	2	3	4	5

75. Osallistuvat piirtämiseen, maalaamiseen,
muovailuvahatöihin ja muuhun taidekasvatukseen 1 2 3 4 5
76. Osallistuvat matematiikkaan, joka on sisällytetty muihin
aineisiin 1 2 3 4 5

Ole hyvä, ja vastaa myös seuraaviin taustatietokysymyksiin.

77. Ikäsi: _____?

78. Sukupuolesi: Mies / Nainen

79. Kuinka monta vuotta olet toiminut opettajana: _____?

80. Kuinka monta vuotta olet opettanut ensimmäistä luokkaa: _____?

81. Kuinka monta oppilasta luokassasi on: _____?

82. Mikä on oppilaidesi ikäjakauma: _____?

83. Opetatko yhdessä muiden opettajien kanssa (liikunnan- tai musiikinopettajia ei tässä
huomioida)?

Ympyröi toinen: Kyllä Ei

84. Missä kunnassa opetat: _____?

85. Mikä on suorittamasi tutkinto?

86. Missä koulutuslaitoksessa suoritit tutkintosi?

Ympyröi seuraavista "Kyllä" tai "Ei" sen mukaan mitä olet tehnyt viimeisen vuoden kuluessa:

86. Lukenut varhaiskasvatuksen artikkeleita alan lehdistä?

Kyllä Ei

87. Ottanut lukukauden aikana osaa varhaiskasvatuksen workshopeihin?

Kyllä Ei

88. Ottanut osaa ammatillisiin varhaiskasvatuksen konferensseihin?

Kyllä Ei

89. Suorittanut yliopiston tai avoimen yliopiston varhaiskasvatuksen kurssin/kursseja ja/tai lapsen kehityksen kurssin/kursseja?

Kyllä Ei

KIITOS SINULLE ERITTÄIN PALJON VAIVANNÄÖSTÄ!

Appendix 2

Teacher Questionnaire

Indicate the amount of influence you believe each has on the way you plan and implement instruction.

1	2	3	4	5
Very Little Influence		Moderate Influence		Much Influence
1. Parents of children in your classroom			1 2 3 4 5	
2. School curriculum			1 2 3 4 5	
3. Principal			1 2 3 4 5	
4. Teacher (yourself, i.e. your own beliefs about the education and development of children)			1 2 3 4 5	
5. State regulations			1 2 3 4 5	
6. Other teachers (colleagues)			1 2 3 4 5	
7. School advisory council (school board)			1 2 3 4 5	

Please respond to the following items by circling the number that most nearly represents YOUR **PERSONAL** BELIEFS about the importance of that item for teaching first grade.

1	2	3	4	5
Not important at all	Not very important	Fairly important	Very important	Extremely important
8. As an evaluation technique in first grade, standardized group tests are _____.			1 2 3 4 5	
9. As an evaluation technique in first grade, teacher observation is _____.			1 2 3 4 5	
10. As an evaluation technique in first grade, performance on worksheets and workbooks is _____.			1 2 3 4 5	

11. It is _____ for first grade activities to be responsive to individual differences in interest. 1 2 3 4 5
12. It is _____ for first grade activities to be responsive to individual levels of development. 1 2 3 4 5
13. It is _____ that each curriculum area be taught as separate subjects at separate times. 1 2 3 4 5
14. It is _____ for teacher-pupil interactions in first grade to help develop children's self-esteem and positive feelings toward learning. 1 2 3 4 5
15. It is _____ for children to be allowed to select many of their own activities from a variety of learning areas that the teacher has prepared (blocks, science center, etc.). 1 2 3 4 5
16. It is _____ for children to be allowed to initiate, plan, and perform own activities (for example, cutting their own shapes, performing own steps in an experiment, planning own creative drama, art, and writing activities). 1 2 3 4 5
17. It is _____ for students to work silently and alone on seatwork. 1 2 3 4 5
18. It is _____ for first grade children to learn through active exploration. 1 2 3 4 5
19. It is _____ for first grade children to learn through interaction with other children. 1 2 3 4 5
20. Workbooks and/or ditto sheets are _____ in first grade. 1 2 3 4 5
21. Flashcards (numbers, letters, and/or words) are _____ in first grade for instructional purposes. 1 2 3 4 5
22. The basal reader is _____ to the first grade reading program. 1 2 3 4 5

23. In terms of effectiveness, it is _____ for the teacher to talk to the whole group and make sure everyone participates in the same activity. 1 2 3 4 5
24. In terms of effectiveness, it is _____ for the teacher to move among groups and individuals, offering suggestions, asking questions, and facilitating children's involvement with materials and activities. 1 2 3 4 5
25. It is _____ for teachers to use their authority through treats, stickers, and/or stars to encourage appropriate behavior. 1 2 3 4 5
26. It is _____ for teachers to use their authority through punishments and/or reprimands to encourage appropriate behavior. 1 2 3 4 5
27. It is _____ for children to be involved in establishing rules for the classroom. 1 2 3 4 5
28. It is _____ for children to be instructed in recognizing the single letters of the alphabet, isolated from words. 1 2 3 4 5
29. It is _____ for children to color within predefined lines. 1 2 3 4 5
30. It is _____ for children in first grade to form letters correctly on a printed line. 1 2 3 4 5
31. It is _____ for children to have stories read to them individually and/or on a group basis. 1 2 3 4 5
32. It is _____ for children to dictate stories to the teacher. 1 2 3 4 5
33. It is _____ for children to see and use functional print (telephone books, magazines, etc.) and environmental print (cereal boxes, milk cartons, etc.) in first grade. 1 2 3 4 5
34. It is _____ for children to participate in dramatic play. 1 2 3 4 5

35. It is _____ for children to talk informally with adults. 1 2 3 4 5
36. It is _____ for children to experiment with writing by inventing their own spelling. 1 2 3 4 5
37. It is _____ to provide many opportunities to develop social skills with peers in the classroom. 1 2 3 4 5
38. It is _____ for first grade children to learn to read. 1 2 3 4 5
39. In first grade, it is _____ that math be integrated with all other curricula areas. 1 2 3 4 5
40. In teaching health and safety, it is _____ to include a variety of activities throughout the school year. 1 2 3 4 5
41. In the classroom setting, it is _____ for the child to be exposed to multicultural and gender neutral activities. 1 2 3 4 5
42. It is _____ that outdoor time has planned activities. 1 2 3 4 5
43. Input from parents is _____. 1 2 3 4 5

Please respond to the following items by circling the number that most nearly represents **HOW OFTEN** your children participate in the following activities, on the average.

1	2	3	4	5
Almost Never (less than monthly)	Rarely (monthly)	Sometimes (weekly)	Regularly (2-4 Xs/week)	Very Often (daily)
44. building with blocks			1 2 3 4 5	
45. children selecting centers (home, book, math, science, writing, etc.)			1 2 3 4 5	
46. participating in dramatic play			1 2 3 4 5	
47. listening to CDs and/or tapes			1 2 3 4 5	
48. doing creative writing (combining symbols/ invented spelling and drawing)			1 2 3 4 5	
49. playing with games and puzzles			1 2 3 4 5	
50. exploring animals, plants, and/or machines			1 2 3 4 5	
51. singing and/or listening to music			1 2 3 4 5	
52. creative movement			1 2 3 4 5	
53. cutting their own shapes from paper			1 2 3 4 5	
54. playing with manipulatives such as pegboards, puzzles, and/or LEGO type blocks			1 2 3 4 5	
55. coloring and/or cutting pre-drawn forms			1 2 3 4 5	
56. children reading in ability level groups			1 2 3 4 5	
57. circling, underlining, and/or marking items on worksheets			1 2 3 4 5	
58. using flashcards with sight words and/or math facts			1 2 3 4 5	

59. rote counting	1	2	3	4	5
60. practicing handwriting on lines	1	2	3	4	5
61. reciting the alphabet	1	2	3	4	5
62. copying from the chalkboard	1	2	3	4	5
63. waiting while others are finishing activity	1	2	3	4	5
64. large group teacher directed instruction	1	2	3	4	5
65. children coordinating their own activities in centers	1	2	3	4	5
66. tangible rewards for appropriate behavior and/or performance	1	2	3	4	5
67. losing special privileges (trips, recess, free time, parties, etc.) for misbehavior	1	2	3	4	5
68. social reinforcement (verbal praise, approval, attention, etc.) for appropriate behavior and/or performance	1	2	3	4	5
69. using isolation (time out, standing in the corner or outside of the room) to obtain child compliance.	1	2	3	4	5
70. games/activities directed by or made by parents	1	2	3	4	5
71. specifically planned outdoor activities	1	2	3	4	5
72. multicultural and gender neutral activities	1	2	3	4	5
73. competitive math activities to learn math facts	1	2	3	4	5
74. health and safety activities	1	2	3	4	5
75. drawing, painting, working with modeling clay and other art media	1	2	3	4	5
76. math incorporated with other subject areas	1	2	3	4	5

Please answer the following.

77. Age: _____

78. Sex: M F

79. How many total years have you taught? _____

80. How many years have you taught first grade? _____

81. How many children are in your class? _____

82. What is the age range of children in your class? _____

83. Do you team teach (i.e. do you share classroom time and/or children with one or more other teachers not including specialists such as physical education teachers, music teachers, etc.)? Circle one. Yes No

84. In which school district do you teach? _____

85. What is your highest degree earned?

86. From which educational institution did you get your highest degree?

Circle "Yes" or "No" for each of the following that you have done **within the last year**.

87. Read early childhood articles in professional journals.
Yes No

88. Attended in-service workshops in early childhood education.
Yes No

89. Attended professional early childhood education conferences.
Yes No

90. Took university course/s in early childhood education and/or child development.
Yes No