The Issues of Developmentally Appropriate Curriculum:  
Relevance and Application to the Early Childhood 
Curriculum in Hong Kong  

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In early childhood education (ECE), curriculum encompasses prevailing theories, approaches and models. Curriculum is planned appropriately based on the knowledge of theory and research about how children develop and learn, with special attention given to individual children’s needs and interests in relation to program goals. In this paper, focusing on ECE, I discuss the underlying rationale, principles and meaning of developmentally appropriate curriculum (DAC) as developed by the National Association for the Education of Young Children (NAEYC) in the United States in 1987. Drawing from relevant literature, I discuss issues of relevance, and application related to DAC with specific reference to ECE experience in Hong Kong.

發展適切課程的探討：對香港幼兒教育課程的相關和應用

幼兒教育課程包括了不少流行的理論，方法與模式，適切的課程是基於幼兒理論，研究與設計，而課程目標能照顧兒童的身心發展，學習，個別需要和興趣。本文旨在探討由國際幼兒教育協會(NAEYC)所倡議的發展適切幼兒課程之理念，原則和意義。作者採用相關文獻資料，引用香港之實地實例來討論發展適切課程的相關和應用。
**Developmentally Appropriate Curriculum**

In terms of Doriscoli and Nagel (1999), developmentally appropriate curriculum (or practice) means curriculum that recognizes and appreciates children’s levels of development, growth, and interest. DAC is curriculum that accommodates a child’s physical, emotional, social, and cognitive readiness. DAC developed in response to educational issues that evolved in the mid-1980s in the United States. During this time, the “earlier is better” ideology led to the increased establishment of academic ECE programs in the United States. Simultaneously, there were two parallel trends sweeping the field of ECE: the increased emphasis on formal instruction with a press for standardized accountability, and the increase in demand from families for greater source of out-of-home childcare (Bredekamp & Copple, 1987).

The NAEYC understood the needs for education to respond to society’s changing forces. To support its position for ECE program that are “play-based”, and to deal with the prevailing needs, the NAEYC produced two editions of the ”Developmentally Appropriate Practice in Early Childhood Education Programs Serving Children from Birth through Age 8” (Brekekamp, 1987; Bredekamp & Copple, 1997).

The two DAP documents have become recommended resources for early childhood educators, practitioners and parents to guide decision-making about educational programs. According to Bredekamp and Copple (1997), there are three dimensions to the concept of developmental appropriateness: age, individual growth patterns, and cultural factors. Age appropriateness draws on the theories of those who posit universal stages of human development, particularly as applied to the first eight years of life. Individual and cultural appropriateness takes into account each child’s own growth patterns, personality, learning styles, family background, and culture. To guide users’ decisions about practice, Bredekamp and Copple (1997) have delineated twelve interrelated principles related to the scopes of: whole child education, values of social and cultural influences to children’s learning, values of play-based approach to children’s learning, children’s experiential learning, individual differences to learning, age appropriateness to learning and scaffolding effect to learning. In addition, in order to inform educators and practitioners of professional ECE practice, Bredekamp and Copple (1997) have further addressed five interrelated basic guidelines covering the areas of: creating a caring community of learners, teaching to enhance development, constructing appropriate curriculum, assessing children’s learning and development, establishing reciprocal relationships with families.

DAC focuses on whole child development and the child’s interactions with adults in appropriate environments. With recognition and appreciation of children’s levels of development, growth, abilities and interest, DAC has been adopted in some ECE settings in the United States and Canada. Unfortunately, few early childhood education classrooms actually exemplify DAC—as little as one-third to one-fifth of the programs studied (Dunn & Kontos, 1997). This seems to be the case in settings serving both preschool-age children and children ages five through eight. Many researchers...
and educators continue to debate its relevance to ECE. Based on relevant literature, I elucidate the issues of DAC’s relevance below.

**Issues of DAC’s Relevance in ECE**

Many ECE professionals have highly recommended DAC as an appropriate curriculum for young children (Bredekamp & Copple, 1997) because of its focus on: experience-driven education, developmental theories, child-centered curriculum, play-based approach, teacher-family-support, and environment. The DAC’s emphasis on children’s meaningful learning experience in early childhood is rooted in the experience-driven thinking of Rousseau, Pestalozzi, Froebel, Montessori and Dewey (1938). Dewey (1902, 1938, 1944) sees experience as the basis of education, and views education, experience and life as intertwined. Dewey (1938) believes that children can learn from their past-present-future experience particularly in early childhood (Froebel, Montessori, in Essa, 1999). Since every child’s experience lives on in further experience in learning, DAC values children’s lived experience.

With special emphasis on the age appropriateness and individual appropriateness, the underlying principles of DAC are highly consistent with the following developmental theories. The maturational theory of Gesell is the key foundation stone of DAC, because it stresses that development and intelligence are determined at birth and that specific skills occur at predictable stages in a particular order. Hence, environment has little influence over early growth and development. Besides, Piaget’s constructivist theory has influenced DAC significantly as it highlights that intelligence is adaptation to the environment and thinking is qualitatively different at each stage: sensorimotor (0-2 years), preoperational (2-7 years), concrete operations (7-11) and formal operations (11-15). Infants and toddlers learn through movement and the sense, preschoolers use symbols to organize ideas, and school-agers acquire logical structures of thought. Gardner’s multiple intelligence theory is referred to by DAC too. Moreover, DAC has considered the value of the psychosocial theory of Erikson. It identifies needs of children at different ages/stages, beginning with a need for trust for infants, autonomy for toddlers, initiative for preschoolers, and industry for school-age children and highlights the importance of social interaction in development. In addition, DAC has adopted strategies in the behavioural theory of Skinner to promote children’s learning. It states that environment is important in shaping all aspects of behavior and consistent positive reinforcement ensure that behavior will be repeated. Furthermore, the sociohistory theory of Vygotsky is accepted in DAC’s principles. Vygotsky believes that social and historic forces shape intellectual ability and language is a primary tool for conveying society’s values. And he highlights the scaffolding effect from adults on assisting children’s learning in their zone of proximal development. In addition, based on Maslow’s theory of humanism, DAC always concern itself with children’s needs. It believes that humans are motivated by fulfilling certain needs: physiological and social-emotional needs. Finally, DAC emphasizes the influence of
social interaction in learning through *imitation* as advocated in the *social learning theory* by Bandura.

Thirdly, grounded in the thinking of Rousseau, Peataloozzi, Froebel, Rudolf and Dewey in child-centered education, DAC focuses upon the *child-centered curriculum*. In DAC children become the primary source of curriculum (Hart, Burts & Charlesworth, 1997). Curriculum becomes the course of study with real and attainable goals met in school and these goals are to be mastered by students with concern for students’ interests and active experience (Dewey, 1902). Based on Dewey’s (1902, 1938) experience-based curriculum, DAC has recommended the *integrated curriculum* to enhance children’s meaningful and joyful learning in well connected subject-matter (Miller, 1993; Drake, 1993; Krogh, 1995). In DAC, *assessment* is only a process of identifying individual child’s development and needs accompanied with parents’ concern rather than as a tool to assess children’s academic performance. In the Hyson, Hirsh-Pasek, and Rescorla study (1990), preschool children enrolled in child-initiated programs displayed lower levels of test anxiety than those enrolled in academic programs. Preschool and kindergarten children in child-centered classrooms had higher expectations for their own success, were less dependent on adult permission and approval, and were more willing to attempt challenging academic tasks. Also, children in appropriate classrooms had more positive attitudes about school. Moreover, classrooms characterized by child initiation appear to facilitate children’s creative development. Children in appropriate classrooms exhibited a better performance than children in academically oriented classrooms in terms of divergent thinking (Hirsh-Pasek, Hyson & Rescorla, 1990; Hyson, Hirsh-Pasek & Rescorla, 1990); language development and verbal skills (Marcon, 1992); receptive language (Dunn, Beach & Konos 1994); reading and mathematics achievement scores (Sherman & Mueller, 1996). DAC can foster children’s growth across developmental domains (Hart, Burts & Charlesworth, 1997). Thus, children become active and self-initiated learners in “learning and living” (Dewey, 1902, 1938).

Fourthly, being influenced by the thoughts of Froebel, Montessori and Piaget in children’s free play, DAC has emphasized *play-based approach* because play by young children is an effective vehicle for promoting learning (Bredekamp & Copple, 1997). Sharing the same view of Spodek (1986) and Maxim (1989), DAC has considered play as the essential ingredient, the tool by which children learn communication (Vygotsky, 1978), socialization (Bandura, 1977), learning about the world around them (Piaget, 1952), understand themselves and others (Piaget, 1952; Vygotsky, 1978), and practice some of the skills they will use in the future (Hartley, 1971). Furthermore, the play-based practices enhance children’s development and facilitate learning. Strong evidence has showed that kindergarten children exhibited lower levels of stress in the classroom when they were enrolled in developmentally appropriate programs (Burts et al. 1992). Consistent with the work on stress, beneficial effects were observed children’s motivation in developmentally appropriate environments as opposed to inappropriate environments (Stipek et al. 1995).
Fifthly, DAC has encouraged collaborative teacher-family support to children. During early childhood, children are largely dependent on their families for identity, security, and care. Good communication and rapport between families and teachers help build mutual understanding and guidance, and provide greater consistency for children (Bredekamp, 1987). Actually, parents can attain the need of the mature adult in the stage of generativity as stated in Erikson’s psychosocial theory.

Finally, creating interactive, stimulating, healthy and safe learning environments for children is an essential component of DAC (Bredekamp & Copple, 1997). This falls into Dewey’s (1938) thinking on experience. Dewey (1938) emphasizes that physical and social environment can shape one’s actual experience. In the experiential continuum, there exists human interaction and situation [environment] (Dewey, 1938). Thus, appropriate environments can foster and enhance children’s learning in language (Vygotsky, 1978), culture (Vygotsky, 1978), social skills (Piaget, 1952; Vygotsky, 1978; Bandura, 1977), motor skills (Gallaher, 1995); cognitive thinking (Piaget, 1952; Vygotsky, 1978). It is a caring community for children to learn under the support and guidance of teachers and parents (Bredekamp, 1997).

Although DAC is currently enjoying wider acceptance because it is beneficial to children’s emotional well-being which is an important prerequisite to intrinsic motivation and optimal learning; and cognitive development, as well as its relevant theory-based beliefs as mentioned above, some researchers are still doubtful about DAC’s relevance in raising questions on developmental theory, multicultural sensitivity, curriculum and teachers. First, accompanied with Bloch’s (1991), Loureno’s and Machado’s (1996) criticism on the overly developmental framework in DAP, Spodek and Saracho (1994) argue that “Developmental theory and educational theory differ significantly. One can inform the other, but one cannot be derived from the other” (p. 111). Developmental theories can be a “resource” for early childhood curricula, but not a “source” (Spokek, 1973), since developmental theories ignore the individual, cultural, and classroom contributions to development (Ramsey, 1987). Evidence on the long-term effects of early childhood programs questions the impact of ECE on the developmental processes (Spodek & Saracho, 1994). Bloch (1991) further criticizes that a prevalence of reliance on traditional development theories limited educators’ and practitioners’ frames of reference to the typical “normed” mainstream population in ECE. Undoubtedly, educational theories in motivation, practice, and class management etc. are vital in a teaching and learning process because they guide teachers how to teach effectively. Finally, DAC has excluded the important influences of gender, politics, culture, and history on children’s learning (Graue, 1992; Stoot & Bowman, 1996).

Secondly, according to Enusook (1998), DAC lacks multicultural sensitivity. DAC does not meet the needs of culturally diverse populations, thus perpetuating social inequity to the advantage of the dominant classes (Lubeck, 1994). DAC is heavily biased toward European American middle-class values (Jipson, 1991; O’Loughlin, 1992). Phillips (1988) emphasizes that “we must examine the values
and beliefs that underlie child rearing practices to figure out how to make our classroom like our home, where children have learned to be powerful. And then we must help our children transfer their power into another cultural setting” (p. 47). Thus, children need to learn cultural knowledge in preschools and homes (Spodek & Saracho, 1994). In the multi-cultural community, young children need to receive multi-cultural education which embodies a commitment to equity, sensitivity and empowerment (Whaley & Swadener, 1990).

Thirdly, Spodek and Saracho (1994) argue that educators need to separate the curriculum content of education (what we teach) from the process of education (how we teach) and only teachers can know how to select appropriate contents, from the cultural and educational perspectives, not only from children’s developmental capability. The rigid DAC guidelines may limit children’s choices and opinions in learning, as well as teachers’ teaching autonomy in curriculum development (Varga, 1997) because teachers themselves are curriculum planners (Connelly & Clandinin, 1988). Besides, Jipson (1991) argues that one set of curriculum guidelines cannot effectively summarize the needs of all children. As a general child-centered curriculum, DAC has not considered some unchangeable physical environment in preschools in different districts, for example; limited space in classrooms and outdoor playgrounds, various designs in school setting as influenced by culture and religions, which will impede the practice (Varga, 1997) to a certain extent.

Finally, DAC has placed too much emphasis on and knowledge to teachers, and how can teachers fulfill their tasks and understand children’s needs just from the prescribed guidelines (Jipson, 1991). In the “real teaching world”, most school administrators are the decision-makers in curriculum. Teachers have no choices. DAC has ignored this point. Teachers are not the only experts in classrooms (Delpit, 1988). Teachers really need adequate SUPPORT and CARE.

Putting theory into practice is a challenging continuous process. Issues on DAC’s application have already aroused ECE professionals’ concern for many years. I discuss the issues below with illustrations from the Hong Kong experience.

### Issues of DAC’s Application in Hong Kong ECE

In the application (blending theories into practice) of DAC in ECE, many issues have been evoked. As a way to discuss these issues, I draw on Schwab’s (1973) four commonplaces of curriculum: subject matter, learner, teacher and milieu. In preschools, subject matter is usually decided by principals and educational authorities based on the educational guidelines of the countries/regions. In Hong Kong, most kindergartens have adopted the “commercially prescribed curriculum” because of the convenient accessibility, practitioners’ limited capability in developing appropriate curriculum, teachers’ and parents’ high expectations on children’ academic performance, and the laissez-faire government policy
on ECE (Opper, 1993). Thus, a teacher-centered approach, didactic teaching strategies, rote-learning, “repetitive-mechanical-drilling exercises and narrow-focused learning experience have dominated the curriculum (Opper, 1993; Hong Kong Education Department, 2000). Also, the emphasis on early academics in preschools has impeded DAC’s application significantly (Bredekamp, 1987), with children pressured “too much, too fast and too soon” (Elkind, 1987). As indicated in the Education Commission’s (2000) education reform consultation document, in the transition period of adopting DAC, there is a need for additional “time” and “opportunities” for change, and adequate provision for curriculum resources and professional support from ECE consultants, Education Department, staff from teacher training institutes. This change will be accompanied with modification and flexibility in curriculum (Gullo, 1992) catering for children’s individual needs. Besides, educators and practitioners may encounter difficulties when incorporating DAC’s principles in their currently adopted curriculum approaches such as: High Scope, Reggio Emilia and Bank Street etc. Finally, there are obstacles coping with the inappropriate multi-cultural practice such as, the large number of young immigrants from Mainland China entering into Hong Kong. However, the advocacy of school-based ECE curriculum (Skilbeck, 1984), particularly with the successful application on the Quality Education Fund since 1998 may solve some application and curriculum issues, and lead to a more appropriate DAC in preschools.

Secondly, young learners are the central focus of education. According to Newberger (1997), currently, most parents and caregivers who push children too hard can do much damage to children’s development. Children become “knowledge receivers” under the pressure of examinations particularly in Hong Kong (Opper, 1993). Children lose interest in learning, experience failure, and are unable to think independently (Eliason & Jenkis, 1999). Most young children’s capacity, interests, potentials and experiences have not been considered deliberately in curriculum planning in Hong Kong. Adults first need to accept DAC’s principles and provide more support and opportunities for children to have active involvement in making appropriate curriculum, and to share their opinions, experience and feelings as active learners (Bredekamp and Copple, 1997) and “protagonists”.

Thirdly, teachers are the heart of education, the planners of curriculum (Connelly & Clandinin, 1988), the key to curriculum reform (Education Commission, 2000), and the multiple perspective-takers in decision making (Eunsook, 1998). Teachers play multiple roles as facilitators, partners, planners and learners in helping children construct their knowledge and understanding (Charlesworth et al., 1993). In DAC, teachers are expected to have a strong foundation of knowledge of child development (Snider & Fu, 1990). However, the question remains (Spodek & Saracho, 1994): Are the teachers well equipped to be more professional than in the past? At present, only around 79.3% of preschool teachers have been trained in Hong Kong (OMEP-Hong Kong, 1999). Without adequate training in child-centered, experience-driven and developmentally appropriate curriculum, teachers confront many difficulties in adopting DAC, especially in Hong Kong (Opper, 1993; OMEP-HK, 1999). Based on the author’s
observation of in-service kindergarten teachers’ teaching practices in Hong Kong, in line with the findings of Oakes and Caruso (1990), kindergarten teachers rarely engaged in strategies consistent with developmentally appropriate practice. The author noted a prevalence of didactic practices in Hong Kong kindergartens. The situation is so worse that not many kindergarten teachers seem to know what appropriate practice is and receive limited assistance in its implementation. Training is the main vehicle in improving quality in education (Powell & Dunn, 1990). According to Snider and Fu (1990), teachers with greater knowledge of developmentally appropriate practice had academic training in early childhood education and child development as well as breadth in the content of that training. However, most preschool and kindergarten teachers are at secondary level with inadequate knowledge of DAC. Thus, to impose this “whole-child-experience-based education” in preschools, teachers need to be well informed and “retrained”. Early childhood teacher training institutes need to strengthen their training program in the breadth of DAC and supervised practical experience. In attaining personal practical knowledge (Connelly & Clandinin, 1988), teachers can relate teaching with their personal experience as a vehicle to make future improvement (Connelly & Clandinin, 1988) through reflection (Schon, 1991). Using a personal metaphor and drawing on their own experience, teachers may have the potentials to shift the role from “director of a film” in teacher-centered curriculum to “conductor of an orchestra” in child-centered curriculum.

Fourthly, milieu is the educational context that is considered in curriculum (Schwab, 1973). Under the pressure of examination-oriented education system like Hong Kong, and in order to please parents’ expectations, most kindergartens are inclined to emphasize academic-oriented curriculum (Education Department, 2000). Parents of young children in Hong Kong appear to be more concerned than teachers about teaching children to count, read, and write and to be less concerned about promoting independence or positive self-concept. In Hong Kong, parents who endorse teacher-directed, didactic approached tend to choose academic early childhood programs for their children, and vice versa. Thus, parents select early childhood programs that are consistent with their educational beliefs (Rescorla et al. 1990; Stipek et al. 1992). Besides, appropriate learning environments provided by teachers can promote children’s learning (Morrow, 1990). However, physical environment is seriously limited in Hong Kong, which has hampered children’s learning through social interactions and plays. Currently, the world is undergoing fundamental economic, technological, social, political and cultural changes (Education Commission, 2000). It is imperative that curriculum keeps pace with the times and be responsive to the needs of individual learners based on the real “situation” (Dewey, 1938). Currently, with regard to DAC’s application in ECE, the following major unsolved impediments need to be highlighted: the examination-oriented educational system, multi-cultural society, ever-changing social structures, transition from kindergarten to elementary level, parents’ support and collaboration, teachers’ professionalism, and government’s support. To adopt a new curriculum reform like DAC, the community and the learners themselves need to make contributions (Education Commission, 2000).
Conclusion

Developmentally appropriate curriculum is based on knowledge about how children develop and learn. DAC means that teachers recognize children’s changing capacities, and children having the capacity for changes (Garbarino, 1989). Respecting children’s unique developing abilities, teachers approach children from where they are, not from where they think children ought to do when designing child-centered, experience-driven appropriate and educative learning experience in preschools. The review of the relevance of DAC has shown that DAC seems relevant in ECE for fostering children’s healthy and balanced development in a positive classroom climate although some criticisms have been raised. Taken together the research favors DAC, child-initiated environments and learning experiences are associated with higher levels of cognitive functioning. Developmentally appropriate curriculum practices are not the norm in early childhood programs. They play an important role in providing practicable and objective guidelines for early childhood teachers to plan their curriculum by blending the early childhood theories into daily practice. As far as the issues on DAC’s application are concerned, they may cover the scopes of subject matter, learner, teacher and milieu. The Hong Kong experiences on key application issues consist of the highly academic-oriented subject matter; a neglect of children’s learning rights on total education; inadequate early childhood teachers’ knowledge and training in DAC; and pressure from an examination-dominating education system and the Government’s inertia to accept early childhood in the fully subsidized foundation education. In conclusion, the teacher is viewed as the most important curriculum changing agent in the global education paradigm. The role of the teacher needs to diverge from “transmitter of knowledge” (Miller, 1985) to “curriculum maker” (Connelly & Clandinin, 1988) and “self-directed learner” (Diamond & Mullen, 1999), particularly in applying the theories of developmentally appropriate curriculum into classroom practice.

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