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# Critical curriculum components in programs for young gifted learners

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*There continues to be a need for providing teachers of young gifted learners with best-practice approaches for the development of curriculum in gifted education programs. Too often, early childhood gifted programs have focused on academic acceleration, and neglect to consider developmentally appropriate approaches to designing curriculum and implementing instruction. This paper presents the Critical Curriculum Components Model as a guide for early childhood educators to consider. It also proposes that that this model can serve as an evaluative tool to analyse existing programs.*

Curriculum, programs, young gifted learners, United States

## INTRODUCTION

The Pre-K to Grade 12 Gifted Program Standards developed by the National Association for Gifted Children in the United States (1998) state that "gifted education programming must evolve from a comprehensive and sound base" (p.3) and that "differentiated curriculum for the gifted learner must span grades pre-K-12" (p.1). Gifted education approaches to developing curriculum and instruction can be found throughout the literature in the form of a variety of models. However, many of these curriculum models have not explicitly considered and incorporated the elements of a developmentally appropriate curriculum for young gifted learners. Although some differences exist between the approaches, there are many similar components that appear to be essential to the development of an effective and appropriate curriculum that acknowledges the gifted student's individual educational and social-emotional needs and abilities. Therefore, identifying the critical components of each curriculum model can offer significant insights and strategies to developers of early childhood gifted programs.

There are many well-established and influential approaches to curriculum development from the fields of gifted education and early childhood education. For example, curriculum models and approaches for gifted education include The Autonomous Learner Model (Betts and Kercher, 1999) The Integrative Education Model (Clark, 1986), and an inclusion approach advocated by Smutny, Walker, and Meckstroth (1997). Early childhood approaches include Montessori (1967/1995), Reggio Emilia (Edwards, Gandini, and Forman, 1998), and the High Scope program (Schweinhart and Weikart, 1993). Combining both can provide information that holds considerable promise for the development of comprehensive curriculum models for the effective teaching, development, and optimal learning of young gifted children. In order to adequately combine gifted and early childhood models, there is a need to examine the available approaches

and models in order to provide a framework of critical curriculum components for teachers to help them prepare challenging, developmentally appropriate programs to meet the needs of young gifted learners.

The purpose of this study was to identify the essential components of several curriculum development models in order to create an effective, holistic curriculum program for use with Pre-K gifted learners. One outcome of the study was the development of the *Critical Curriculum Components Model* (*C3 Model)* that not only addresses gifted Pre-K curriculum but, also, can be applied to gifted curriculum for all ages of learners. This paper briefly explains the development of the *C3 Model* and provides details of each component. Finally, suggestions are made for uses of the model in current programs and in the development of new programs.

## EXAMINING THE LITERATURE

A number of early childhood curriculum approaches and gifted curriculum approaches were examined in the meta-analysis of the literature. Only six of the approaches were found to comprehensively address most if not all of the critical curriculum components are presented here. Those approaches include three that focus on young gifted learners and three that were developed for general early childhood education programs.

Of the gifted models that were considered, Smutny's, et al. (1997) regular classroom approach spoke specifically to the Pre-K curriculum and needs of gifted children four to eight years old; while Clark's Integrative Education Model (1986) and Betts' and Kircher's Autonomous Learner Model (1999) offers a well-rounded approach to the development of curriculum from Pre-K to high school that addressed the cognitive, academic, and social-emotional needs of the gifted learner. Three early childhood education program models that presented the most comprehensive approaches to curriculum development were High Scope (Schweinhart and Weikart, 1993) that offers scientifically-based information, Montessori (1995) which offers both individual and group information, and Reggio Emilia (Edwards, et al. 1998) which offers a constructivist approach.

The six approaches were analysed to determine in what way they were effective in the development of curriculum programs for young gifted learners. The analysis revealed that there were seven common components across the highly effective curriculum development models and approaches. These components include (a) a stated philosophy, (b) an explicitly planned environment, (c) a focus on interpersonal interactions that facilitate optimal learning, (d) a developmentally appropriate curriculum plan, (e) instructional strategies that successfully challenge the individual learning needs of the student, (f) systematic student assessment using a variety of methods, and (g) research that provides accountability for the approach and justification for its use.

## THE CRITICAL CURRICULUM COMPONENTS MODEL

Consideration and inclusion of seven components in some form are critical to the development of comprehensive curriculum that is effective *and* developmentally appropriate for young gifted learners. Using all of the components identified by the *Critical Curriculum Components Model (C3 Model)* can be compared to an artist using varying degrees of all the various hues of paint on the palette (Figure 1). The early childhood educator uses the palette of critical curriculum components, mixing and blending them together and choosing variations of each, to create an effective educational program for all children, including the young gifted learner.

The seven critical components can assist early childhood educators in two major ways. They can be used to develop new programs and curriculum by facilitating the educators ability to judge various approaches and models to determine which aspects would be effective in the early childhood educator's particular teaching and learning setting. Secondly, the components provide a

means by which existing programs and curriculum can be examined, analysed, evaluated, and adjusted.


**Figure 1. The educators' palette of critical curriculum components for creating effective and appropriate learning for young gifted students**

As we worked to come to a common understanding of the components and developed a definition of each component in terms of early childhood education, it became apparent that the seven common components could be easily used in program and curriculum development at all levels of education. However, for this particular paper, the components of the model are viewed in the context of curriculum development for young gifted learners. The definition for each component is shown in Table 1.

**Table 1. Definitions of the Critical Curriculum Components**

| COMPONENT | DEFINITION |
|---|---|
| Philosophy | A statement of foundational educational values and beliefs. |
| Environment | The purposeful arrangement of equipment/materials/people, space, lighting, and use of time in all indoor and outdoor environments. |
| Interpersonal inter-actions | Professional-to-child, child-to-child, professionals-to-parent, and professional-to-professional interactions; includes individual and collaborative models for professionals, and individual and grouping models for children. |
| Curriculum | A written plan for learning experiences, including objectives/ standards, selection and organisation of content, appropriate learning experiences, and determination of the most appropriate sequence for learning activities. |
| Instruction | The method in which the curriculum is delivered such as direct, individual and group instruction. |
| Assessment | The use of a variety of strategies in order to (a) determine a child's development, strengths, needs, (b) document progress, and (c) make decisions for child and program improvement.. |
| Research | Verification that program choices and decisions are validated through on-going research efforts. |

Teachers seldom use exclusively one program approach or curriculum development model. Experienced teachers tend to describe their approach to teaching as eclectic in nature, selecting various components from a number of different models, approaches, and writers as they develop curriculum, making the *C3 Model* one that fits current practices.

A matrix to facilitate this selection process is presented in Table 2. Early childhood educators can use the seven critical curriculum components in the matrix as criteria to analyse single or multiple approaches. Aspects of each approach that address a critical curriculum component can be written in that component row under the approach name. In this way a 'picture' can be 'painted' of each approach allowing the early childhood educator to easily see and compare the components of the approaches and determine the appropriateness and viability of their inclusion in a specific program.

**Table 2. Analysis Matrix for Evaluating Curriculum Development Models and Approaches Using the Critical Curriculum Components Model**

| | **Model or Approach** | | |
|---|---|---|---|
| **Component** | Insert Model Name Here | Insert Model Name Here | Insert Model Name Here |
| Philosophy | | | |
| Environment | | | |
| Interpersonal Interactions | | | |
| Curriculum | | | |
| Instruction | | | |
| Assessment | | | |
| Research | | | |

The matrix shown in Table 2 was used in the final analysis of what was considered to be the most promising curriculum development models and approaches identified during the literature review. To complete the matrix, brief descriptive phrases were used to characterise each component.

Rather than showing the analysis for all six approaches in the matrix, the analysis of one gifted model and one early childhood approach are shown in Table 3. Hopefully, this assists the reader in developing a more in-depth understanding of the model, of each curriculum component, and of the usage of the analysis matrix.

**Table 3. Analysis of the Integrative Education Model and the High Scope Model Using the Critical Curriculum Components Analysis Matrix**

| **Component** | **Model or Approach** | |
|---|---|---|
| | Clark's Integrative Education Model | High Scope Model |
| Philosophy | 1. Belief that there is a need for an integrative use of brain functions in the learning process. Each function is intricately interdependent on each other function. Brain/mid complex best developed when opportunities are made available for that interdependence p.6<br>2. Early experiences are critical in the development of intelligence p.8<br>3. New organisations for curriculum presentation needed to personalise learning approach and restructured opportunities for the limitless possibilities of the brain/mind system. p.9 | 1. Based on constructivist approach<br>2. Developed from the Perry Preschool Project (initiated in 1962) – outcome was to prevent school failure<br>3. Children are active learners |
| Environment | 1. Key 1 of model is The Responsive learning environment – used to establish the social-emotional and physical climate of the educational setting p.48<br>2. Movement is necessary part of learning environment. (Manipulative materials, rhythms, role playing, creation of simulations of real events Clark, p.34<br>3. Should be filled with a variety of objects and activities, with an observant, responsive caregiver present who interacts with the child p.49<br>4. Social environment must be diversified to provide a variety of stimulating experiences for optimal human potential development | 1. Materials rich environment<br>2. All materials, areas, learning items are labelled to help children learn organisational skills and for literacy purposes<br>3. Materials are easily accessible at child's level<br>4. Areas within the classroom are set up to build social relationships |

**Table 3. Continued**

| Component | Model or Approach | |
|---|---|---|
| | Clark's Integrative Education Model | High Scope Model |
| Interpersonal Interactions | 1.Encourages students to be active participants in learning process Clark, p.33<br>2. Includes students in the planning of learning<br>3. Teacher is a facilitator (guide on the side)<br>4. Open, respectful and cooperative relationship among teachers, students and parents<br>5. Teacher, student and parents form a team in the learning process p.48 | 1. Adults include teachers and parents<br>2. Children are allowed to solve their every day intellectual, social and physical problems, encouraged to express their own thinking, and to interact socially with other children<br>3. Substantial outreach to parents; includes social services connections for parents |
| Curriculum | 1. Encourages experimentation and exploration of interests<br>2. Utilises compacting to ensure that students are challenged and motivated<br>3. Curriculum based on students' interests, learning styles, needs and abilities<br>4. Provides for affective learning and emotional growth Clark p.31<br>5. Flexible to meet learner needs<br>6. Uses enrichment and acceleration<br>7. Complexity of content allows for deep learning<br>8. Develops and uses higher order thinking skills<br>9. Encourages creativity and leadership<br>10. Curricula includes guided imagery, dreams, mind/body integrative<br>11. Is differentiated on an individual basis<br>12. Learning experiences for development of all four brain functions (cognition, sensing, feeling, and intuition)<br>13. Curriculum is integrative and builds a framework of understanding | 1. Designed around key experiences including: creative representation, classification, language and literacy, seriation, initiative and social relation, numbers, movement, space, music and time<br>2. Children clean up their own play areas; labels on all materials help with this process |
| Instruction | 1. Allows students to control their learning. Provides for student choices.<br>2. Focuses discussions towards open-endedness. Empowering language and behaviour<br>3. Whole group learning is minimal p.33 | 1. Teacher encourages active learning, encouragement to initiate and carry out their own learning experiences (Plan-Do-Review: children plan what they will do, do it, then review what they did with the teacher)<br>2. Teacher role is to listen, ask open-ended questions,<br>3. Includes individual time with teacher, small group experiences and large group experiences<br>4. Children are encouraged to share their thinking with others |
| Assessment | 1. Learning process documented through many mediums (Photographs, videotapes, audio recordings, models notes, other product/project results)<br>2. Assessment used to inform immediate and future curriculum decisions<br>3. Uses a variety of authentic assessment techniques | 1. Teachers observe and record child activities every day.<br>2. Uses the Child Observation Record to document and assess child development and skills (for example, initiative, social relations, creative representation, music and movement, language and literacy, logic and mathematics) |
| Research | 1. Well-grounded with many references to research made throughout the book to justify the need for individualisation, the importance of the learning environment, student-centred learning, grading reliability and practices, the critical role of intuition and the prefrontal cortex of the brain in high level intellectual and emotional operations, etc.<br>2. New Age School (NAS) has been held, six weeks in summer since 1979. From this experience, the model and its components have evolved. | 1. Longitudinal research from beginning; significant findings that include significantly higher numbers graduating from high school, going on to college; and decreased teen pregnancies than control group |

## CONCLUSION AND IMPLICATIONS

The *Critical Curriculum Components Model*, though in the early development stages, promises to be an important curriculum development tool for early childhood educators. It alerts the reflective practitioner to the essential critical components that should be considered when creating curriculum that is developmentally appropriate as well as effective for the development of young gifted learners' cognitive potential. The *C3 Model* also can serve as an evaluative tool with which to analyse existing programs and curriculum.

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