Introduction to Curriculum for Gifted and Talented Students: A 25-Year Retrospective and Prospective

Joyce VanTassel-Baska

The College of William and Mary

Curriculum for the gifted has been a major issue in the field over the past 25 years as attested to by the proliferation of books and articles on the subject. In preparation for writing this chapter, the author reviewed articles published in three journals as well as G*ifted Child Quarterly* to identify key trends and issues of note. Clearly, much space has been given to curriculum topics in G*ifted Child Quarterly* as well as other journals of note, including *Roeper Review, Journal for the Education of the Gifted*, and *Journal of Secondary Gifted Education*. The major emphasis of articles, regardless of source, across these years has been on (a) the values and relevance factors of a curriculum for the gifted, (b) the technology of curriculum development, (c) aspects of differentiation of a curriculum for the gifted within core subject areas and without, and (d) the research-based efficacy of such curriculum and related instructional pedagogy in use. Table 1 provides an overview of these emphases and the sources from which they come. Each of the seminal articles included in this volume are represented in the table along with selected articles from other journals.

Table 1 An Overview of Seminal Curriculum Studies, 1982-2002

Values and Relevance Factors in Gifted Education	Passow (1986) Renzulli (1992) Kirschenbaum (1998) Piirto (1999) Ford & Harris (2000)
The Technology of Curriculum Development for the Gifted	Kaplan (1982) Maker (1986) Jacobs & Borland (1986) Renzulli (1988) Johnson, Boyce, & VanTassel-Baska (1995) Purcell, Burns, Tomlinson, Imbeau, & Martin (2002)
Aspects of Differentiation for a Curriculum for the Gifted	Renzulli (1982) Wheatley (1983) VanTassel-Baska (1986)
Research-Based Efficacy of Differentiated Curriculum and Instruction for the Gifted	Gallagher, Stepien, & Rosenthal (1992) Lynch (1992) Sowell (1993) Gallagher & Stepien (1996) Ravaglia, Suppes, Stillinger, & Alper (1995) VanTassel-Baska, Johnson, Hughes, & Boyce (1996) Friedman & Lee (1996) VanTassel-Baska, Bass, Reis, Poland, & Avery (1998) VanTassel-Baska, Avery, Little, & Hughes (2000) VanTassel-Baska, Zuo, Avery, & Little (2002)

SPECIAL EARLY EMPHASES ON PROCESS AND CONTENT

The early articles in the *Gifted Child Quarterly* seminal pieces come from Kaplan (1982) on the need to provide multiple curriculum options based on the multiple prototypes of gifted learners and Wheatley (1983) on the need to focus 20% of the mathematics curriculum for the gifted on problem solving while distributing the rest of the emphases across the National Council for Teachers of Mathematics (NCTM) standards. His stated concern was that textbooks of the time overindulged in computational rules at the expense of higher order mathematical reasoning, a concern that has continued to plague the field. Even as late in the reform effort as 1995, in a review of commercial science materials, Johnson, Boyce, and VanTassel-Baska found a similar problem. Textbooks still represented a major source of use in schools yet contained very limited differentiated features for special populations of learners. The authors provided a

checklist for schools to use in selecting appropriately differentiated materials for gifted students in science. More recently, Purcell, Burns, Tomlinson, Imbeau, and Martin (2002) have published a set of criteria for developing and evaluating curriculum regardless of subject area, a result of five years of NAGC curriculum division work.

SPECIAL ISSUE ON CURRICULUM IN 1986

A key set of the seminal articles on curriculum selected for this volume came from a special issue co-edited by A. Harry Passow and myself in 1986. We had come to believe that the field needed to take a stronger interest in the content of interventions for gifted learners as an antidote to the emphasis that had been placed on conceptions of giftedness, identification, and administrative arrangements. The issue was also timely for NAGC in that the Curriculum Division had just been formed. As its first chair, I focused our work on early projects to (a) develop scope and sequence models for the field and (b) develop model or exemplary units of study. The selected articles for this special issue of *Gifted Child Quarterly* then were highly pragmatic, attempting to provide guidance to practitioners for important "close to the ground" issues of curriculum.

Passow's article on secondary programming was laudatory in its insistence on a secondary program model for the gifted that was finely balanced between cognitive and affective areas. His insistence on a goal structure that called for concerns about self-understanding, service to others, and moral and ethical development around real-world issues alongside the emphasis on higher level thinking and problem-solving, a stress on the liberal arts, and specialized opportunities attested to his deep belief in developing gifted individuals who could and would help construct a better world. His notion about the need for balance between general and specialized development of abilities is also worth noting. While an advocate for Advanced Placement and International Baccalaureate programs, he also saw the need for more personalized interactions like mentorships, internships, and independent study. Passow saw clearly the role of good guidance practices in holding a secondary program together and worried about the limitations placed on holistic development of the gifted when such provisions were lacking.

Another pragmatic piece in this same issue was the Jacobs and Borland (1986) treatise on interdisciplinarity, a well-reasoned and thoughtful look at ways to think about creating interdisciplinary curriculum. Central to their argument for such curriculum for the gifted lay their deep understanding of the capacity of this type of learner to handle the complexity and abstract connections demanded of serious work across disciplines. Their stance on the teachers' need to know one discipline well before attempting to make meaningful connections to other disciplines is as true today as it was 18 years ago. Jacobs, of course, went on to write more deeply on her own about the key processes for

developing such curriculum and worked with many teachers to accomplish the feat. The authors also offered their audience good examples of organizing approaches and examples of what an interdisciplinary curriculum might be like. Then, as now, little research evidence supports the efficacy of the approach although educators of the gifted still recommend it today as a key ingredient in effective curriculum structure (Tomlinson, et al., 2002; VanTassel-Baska & Little, 2003).

The Maker article on scope and sequence continues the pragmatic nature of articles from this special issue. Its down-to-earth presentation of definitions, rationale, development steps, and clear examples provided the field with a blueprint for such development as this area of macro curriculum development was beginning to evolve as an important consideration in programs. The middle to late 1980s saw a major increase in scope and sequence projects, not unlike the increase in curriculum development unit projects today. The Maker article remains contemporary in its approach; moreover, the need for such work has not abated as attested to by a current meta-evaluation of gifted programs (VanTassel-Baska, in press).

The VanTassel-Baska piece in the 1986 issue focused on the need for employing complementary approaches to developing curriculum for the gifted, based on research of effectiveness to date. While the number of curriculum studies has increased subsequent to this article, none refute the basic premise of the need to accelerate curriculum in all relevant subject areas for gifted learners, the need to focus on the high level process skills of thinking, problem-solving, and research that may result in a high-quality product, and the need for a concept or thematic emphasis that is both intra- and interdisciplinary. This article ultimately marked the beginning of the Integrated Curriculum Model (ICM) that evolved into the William and Mary curriculum work in all subject areas at elementary and secondary levels (VanTassel-Baska & Little, 2003). The thinking in the 1986 article, however, had not yet integrated the three curriculum emphases, but rather saw them as parallel curriculum considerations. In the subsequent 18 years, the integrative nature of the model has been translated into exemplary units of study, beta-tested, and found to be statistically significant and important educationally for use with gifted populations of learners across multiple states, school districts, and grouping patterns (VanTassel-Baska, Bass, Ries, Poland, & Avery, 1998; VanTassel-Baska, Zuo, Avery, & Little, 2002). While the article presaged a new model for curriculum development, it represented primarily a research-based perspective on what was already working in separate curriculum being used at the time.

SPECIAL ISSUE ON CURRICULUM IN 1998

A more contemporary issue of *Gifted Child Quarterly* was also devoted to curriculum, this one conceived and commissioned by Ann Robinson as editor in

1998. This issue was dedicated to the curriculum wisdom and work of A. Harry Passow and contained two seminal pieces of note. The first was the publication of the William and Mary science curriculum study on using problem-based learning units in elementary classrooms (VanTassel-Baska et al., 1998). The study broke new ground in its use of a quasi-experimental study in 45 classrooms to demonstrate the significant level of scientific research skills attained by students using the units over their comparison counterparts. It also suggested that grouping patterns were not important in the delivery of the curriculum, with cluster, pull-out, and self-contained all being successful settings for use of the units of study. The study also revealed, however, that much more growth was possible for gifted students than attained, especially in the areas of higher level thinking in designing experiments. Implementation data suggested that both teachers and students found the units engaging and motivating. This study represented a major breakthrough in curriculum studies of the gifted by demonstrating empirically the value of differentiated curriculum.

The second piece included in this special issue was an interview with A. Harry Passow before he died in 1997 (Kirschenbaum, 1998). It chronicles his 40 years of work with curriculum issues and the realities of that work in special projects and his own teaching. A special part of the interview was his recollection of working with a future Westinghouse scholar, feeling his way with an extraordinary learner, yet always giving him his choice as he explored deeper project-based attainment. Passow's notion of "conversation" as the basis for facilitating independent study rings highly contemporary with current work on social-cognitive learning even though it took place 55 years ago. Passow's wisdom also comes through in his belief that curriculum for the gifted must be both excellent and equitably available lest we be unsuccessful in our work to upgrade all of education. He was heartened by the new emphasis in curriculum development, using different models to accomplish similar goals.

CURRICULUM AS CREATIVE PRODUCTION

Work in curriculum that threads throughout the 25-year period is well represented through three articles by Renzulli (1982, 1988, 1992), which share common themes. Each is concerned with qualitative differentiation. Each offers a different model for thinking about curriculum development. Finally, each article employs a set of commonplaces to explain and articulate what matters in curriculum for the gifted: the features of the learner, the teacher, and the dynamism of process-product curriculum operating within a goal of developing creative productivity in individuals.

In his 1982 article, Renzulli noted the elusiveness in defining qualitative differentiation for the gifted and decried the then common practice of teacher-developed curriculum on the grounds of its being questionable in quality and utility. Rather he posited the use of real problems as the central focus of designing curriculum for the gifted in an attempt to move away from prescribed

curriculum as promoted by teachers and textbooks, presented to students, providing predetermined pathways of learning, and resulting in predetermined products. Knowledge in a real-problem approach to curriculum, according to Renzulli, becomes a variable of instruction rather than a predetermined outcome. While inquiry becomes the central process, the role of the teacher in such a schema is as facilitator or navigator of discipline-specific concepts and methodology as well as resource scout.

The 1988 article on his multiple menu model moved to a consideration of differentiation through planning guides that consider both problem-based knowledge and the instructional techniques that foster it. In the model, knowledge and techniques equate to curriculum, which leads to instructional products, the heart of differentiation, according to Renzulli. He provided a set of menus that correspond to knowledge and instructional objectives, instructional strategies and sequences, and artistic modifications. The idea of the menus highlighted the importance of each aspect of the curriculum and the flexibility that may be involved in designing in each feature.

In the 1992 article, Renzulli turned from the practical to the theoretical in his paper on the development of creative productivity through deliberate acts. He posited that characteristics of the gifted learner, the teacher, and curriculum contribute to providing "ideal acts of learning." One of the most interesting and insightful aspects of the paper was the special notion about the emerging function of the optimal match between the personality of the learner and the nature of the tasks in respect to their "interestingness" that leads to task commitment. His insistence on paying equal attention to student ability, interest, and learning style in the selection process was well-articulated in this paper. The central curriculum features emphasized were the structure of the discipline as an emphasis through key concepts and methodologies as well as its appeal to the imagination. The teacher was cited as needing to have strong disciplinary knowledge in at least one area, exhibit the personality characteristics of flexibility, openness to inquiry, energy and optimism, and a love for what she teaches. The article concluded with a plea for research on the process of learning how to become a creatively productive person and the critical nature of the talent development process.

CONTRIBUTIONS TO CURRICULUM FROM OTHER SOURCES

Several articles published in other journals add to our appreciation of curriculum work over the past 25 years. In their review of 101 practices, Shore and Delcourt (1996) remind us of our limited research base on several areas within the field, including curriculum differentiated in ways beyond the accelerative mode.

Piirto (1999) presented a postmodern vision of curriculum for the gifted that transcends the pragmatic views held by many in our field, exhorting educators to consider issues of gender, class, and race biases for examining discourse and

power principles in curriculum work. Ford and Harris (2000) provide an important way to think about multicultural curriculum for gifted programs, suggesting the need to tailor curriculum effectively for learners from different cultural backgrounds through merging the heuristic principles of Bloom and Banks.

A few studies examined content-specific issues in curriculum for the gifted. Sowell (1993) carefully reviewed mathematical programs for the gifted and concluded that effective programs employed strong acceleration and grouping approaches in delivering curriculum. Lynch (1992) found that a compressed fast-paced summer class in the sciences effectively prepared academically talented secondary students for early admission to high school science coursework, a major boon in keeping gifted students in advanced science learning. Ravaglia, Suppes, Stillinger, and Alper (1995) contributed a rare article on the impact of the on-line EPGY program on learning. The study suggested that for many of the selected students, the technology-based curriculum was efficacious in advancing their mathematics and science learning. VanTassel-Baska, Johnson, Hughes, and Boyce (1996) found gifted students excelled in a curriculum of higher level thinking in language arts through literary analysis and interpretation, persuasive writing, and language study in comparison to students not receiving such a curriculum. VanTassel-Baska, Avery, Little, and Hughes (2000) also found that schools and districts were positively impacted by a curriculum innovation implemented for gifted learners.

Some studies of curriculum intervention also focused on models of teaching and learning that facilitated academic growth. Gallagher and Stepien (1996) studied secondary students in social studies classrooms, finding that the students using a problem-based learning approach gained as much traditional content learning as did the group not engaged with the PBL model. An earlier study (Gallagher, Stepien, & Rosenthal, 1992) found significant improvement in problem-solving schema for secondary students enrolled in a PBL-based course. Friedman and Lee (1996) tested three instructional models for the gifted and found the cognitive-affective model to be superior in enhancing group interaction and level of discourse.

ISSUES AND TRENDS IN CURRICULUM FOR THE GIFTED

Quantitative and qualitative differentiation has been the bedrock issue in thinking about appropriate curriculum for the gifted over the entire span of time represented by these articles. Understanding how much to accelerate a child's learning, when, and in what area, remains a quantitative concern in differentiated practice. Yet more attention has been afforded to the qualitative side of curriculum. What constitutes qualitative differentiation has produced 11 models in the field, all aimed at describing these qualitative features. Regardless of the model presented, all have the common feature of generative learning of the gifted as the base of appropriate differentiation, with an emphasis on using higher level

concepts and processes to promote it. This staple formula for thinking about differentiation, however, has yielded considerable confusion and difficulty in practice, creating a need for simplifying the process for teachers into instructional processes to be applied.

The future trend in this area may rest with using curriculum already differentiated for gifted learners as a group and tailoring it for special gifted learners in a given context. Work like the William and Mary units and others under development through other Javits projects may become the models for the field in trying to ensure differentiated practice rather than relying on individual teachers to make inferences about what it should be. Evidence currently suggests that in general both teachers of the gifted and regular classroom teachers are underutilizing differentiation practices for gifted students (VanTassel-Baska, in press). More well-designed and differentiated materials are clearly needed to provide ample exemplars of what appropriate differentiation looks like and how it may be taught and assessed in practice. The field also needs more, not fewer, quality packaged materials that are research-based, with proven effectiveness for gifted learners.

A second issue in curriculum for the gifted is the relative paucity of curriculum and program articulation across the years of schooling. One way to build such articulation is to plan for it. The majority of school districts do not have a curriculum framework or a scope and sequence that provide a central tool for communicating about curriculum to stakeholders in the district and serve as a touchstone for effective practice. A curriculum framework would provide a set of K-12 goals and outcomes for the gifted so that teachers, parents, and students could understand the structure of the program across years. A scope and sequence by content area provides further delineation of goals and outcomes within major strands of study. Minimally, districts should be able to demonstrate how students who are verbally and mathematically talented have differentiated outcomes at key levels of the schooling process. Ideally, such work would be available in all areas of the core curriculum and in selected noncore areas such as foreign language and the arts as well. Underlying this issue is a lack of program leadership and coordination from which the field is currently suffering. Very few people are assigned full-time responsibility for administering gifted programs, with little or no priority placed on curriculum development work that could move a program to a higher level of functioning on behalf of gifted learners.

The trend needed to stem the tide of idiosyncratic unit development is a full-scale effort to build models of curriculum practice at the district level that endures across teachers, grade levels, and years of the program. However, in order for such frameworks to be useful and viable, they must form a part of the professional development program for gifted education and be seen as critical partners in curriculum enhancement. Only strong curriculum leadership in school districts can ensure that such curriculum work is ongoing and practiced.

A third troubling issue in curriculum for the gifted is alignment with state standards and hallmark programs for the gifted. How do we ensure that the

curriculum employed in schools is appropriately aligned with what all students are learning yet goes beyond it in important ways? Work on such alignment may very well be a state responsibility. A model now exists for such work in the state of Oregon where teams of state curriculum consultants worked alongside teachers of the gifted to create a state document on curriculum alignment, disseminated to all districts. Equally important is the task of aligning curriculum at elementary and middle schools to the hallmark secondary programs of Advanced Placement and International Baccalaureate. While both College Board and the IBO have organized vertical teaming and pre-IB, respectively, the field of gifted education also has a responsibility to ensure that connections exist in programs to prepare students for strong participation later in their schooling since both programs are seen as the best examples of rigor and quality that exist in K-12 schooling.

A trend to deal with this issue of alignment has already begun as seen in the state of Oregon. Individual school districts also have undertaken this challenge. Places as diverse as Greenwich, Connecticut, Montgomery County, Maryland, and Salt Lake City, Utah, have developed models of alignment work that have great merit for the field. This trend can only continue as gifted education becomes more integrated into the mainstream of general education. In the case of AP and IB, gifted educators must realize that all selective colleges are looking for students to have participated in these programs or to have taken dual enrollment courses as a proxy for high school course rigor. Without such options, these students will not gain admission. In several school districts, data suggest that identified gifted students are seriously underrepresented in Advanced Placement programs and performance levels are also below expectation. (VanTassel-Baska & Feng, in press). Thus the movement to create stronger alignment to these programs appears to be justified.

Finally, I must return to the issue voiced by Passow over the last 25 years, that of curriculum balance. Partially because we run programs that are part-time and partially because we have not clearly articulated our curriculum goals and outcomes for gifted learners, curriculum balance is deeply at risk. Little evidence suggests that the affective development of gifted students is occurring through special curricula for the gifted. Moreover, interdisciplinary efforts at curriculum frequently exclude the arts and foreign language. Only through acknowledging and applying curriculum balance in these areas are we likely to be producing the type of humane individual Passow envisioned. These areas of the curriculum are as vital if not more so than our obsession to demonstrate increased academic learning. Yet the issue is complicated by the fragmentation of programs at every level, the practice of inclusion which results in even less time being devoted to flexible grouping and differentiated practice, and teachers lacking a background in gifted student needs for social, emotional, and aesthetic development.

The trend toward balance will only come into being as we return to an understanding of serving gifted learners comprehensively, of ensuring that a full set of curriculum options across domains is available to them at an appropriate level. It also means recognizing that social-emotional nurturance and

contact with the arts of expression are as necessary as food and water in a curricular structure. Professional developers must become more sensitive to incorporating this larger vision of curriculum emphases into work with teachers and parents. As more gifted learners bring disabling characteristics and habits into school, we must be prepared to provide for them through a balanced emphasis in our curriculum structures.

CONCLUSION

The trend for curriculum designed for the gifted in the future must embrace paradox. It must provide students a rigorous, high-quality experience that readies them to successfully traverse the next level of educational challenge in a selective university as well as ground them in self-learning and social learning of the moment. It must help them find true self in the midst of growing toward a professional career. It must inculcate a healthy sense of respect for civilization's past accomplishments as well as a desire to shape a new and better world in the future. Such a curriculum must first be envisioned, then developed, and then implemented. The real challenge for the future of curriculum in this field is the preparation of educators committed to the vision of curriculum as the core of what makes gifted education a worthwhile enterprise.

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