
SPECIAL ISSUE ON EARLY COLLEGE ENTRANCE PROGRAMS

Understanding and Serving Precocious Youth Across Nations: Introduction to the Special Issue on Early College Entrance Programs

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In this introduction to the Special Issue on early college entrance programs, I discuss the historical, pragmatic, and theoretical importance of this form of accelerated education for precocious adolescents. The introduction particularly emphasizes a comparative education perspective on early college entrance programs across nations, which helps identify commonalities and differences in motivations for setting up these programs, as well as ensuing admission policy, curriculum provision, and support systems. I argue that a comparative perspective in research will enhance our understanding of this form of accelerated education and facilitate improved practice.

Early college entrance is one of the most commonly implemented acceleration forms (Colangelo, Assouline, & Gross, 2004). Despite its importance, research efforts in this line of inquiry tend to be isolated, and coordination of these efforts is needed for a better understanding of this form of acceleration and improvement on practice. In this special issue, four groups of researchers introduce four early college entrance programs in China, Australia, and the United States; highlight their distinct approaches and practices; present research findings and perspectives on the benefits and challenges of such programs for early college entrants, academically, affectively, and socially; and suggest future directions in research.

EARLY COLLEGE ENTRANCE PROGRAMS FROM HISTORICAL, PRAGMATIC, AND THEORETICAL PERSPECTIVES

Early college entrance has a long history. Many universities are willing to take early entrants on an individual-by-individual basis, largely based on demonstrated intellectual

precocity. Famous names associated with precocity (often labeled as child prodigies) and early college entrance include William James Sidis, Norbert Wiener, and Jean Piaget. Wiener (1894–1964) entered Tufts College at the age of 11, graduated at 14, and went ahead to make groundbreaking contributions as a mathematician to cybernetics, engineering, and control systems. Piaget (1896–1980) published his first scientific paper at the age of 10, attended the University of Neuchâtel before 15, and received his doctoral degree in biology at 22. He was, of course, one of the most influential psychologists of all time. Sidis (1898–1944) entered Harvard at the age of 11 and graduated at the age of 15. Sidis's upbringing, including his early college entrance, is more controversial. He was even considered an educational failure (partially due to the way his father raised him) given his extreme intellectual precocity and social ineptitude (Montour, 1977).

Compared to early college entrance as an individual's choice and a college's willingness to take students much younger than "normal," systematic programming for early college entrance has a relatively shorter history. It represents an educational endeavor that systematically orchestrates efforts to offer educational experiences deemed appropriate to precocious learners, ease their transitions to college, and support their personal growth. This is the focus of this special issue. One of the reasons for the birth of early college entrance programs is that early college entrance is not something that can be taken for granted; its ramifications should be well understood and the course of early entrants' college life carefully planned. In other words, early college entrance programs can be examined from both pragmatic and theoretical points of view.

Pragmatically, as an educational innovation and experimentation, programming for early college entrance involves

a system of practices and provisions (including policies, curricular strategies, and tools and resources that define the nature, scope, and quality of service) that are consequential with respect to early entrants' educational experiences and success. Early college entrance raises pragmatic concerns for parents and educators alike about their children's education: unduly high expectations, inappropriate speeding up of educational progression for young learners, inept social skills or social maturity level, not being well-rounded and living a "normal" life, and more. Some of these concerns are folk beliefs, not well founded in reality, and others are reasonable and warrant careful educational planning to prevent or mitigate. It behooves the educational programmers to design their programs in a way responsive to these concerns.

Theoretically, early college entrance programs can be seen as a test of optimal human development. Ultimately it is an experiment with human potential. By nature, early college entrance programs proactively select certain youngsters for an endeavor that presumably can advance their academic development and personal growth in a way that is "accelerated" but commensurate with their levels of development and productive and appropriate given their demonstrated promise. It is an experiment of how *nurture* (i.e., what educators provide) can bring about maximal effects of *nature* (i.e., what the child brings to the situation), how nature constrains nurture, and in what way it is the interaction of nature and nurture that produces *the goodness of fit* (Dai & Coleman, 2005). In short, the effectiveness of an early college entrance program truly reveals the power and limits of an accelerated education: the power lies in its transformative capability (e.g., creating a productive life trajectory), and the limits lie in constraints imposed by characteristics of the child involved (i.e., some will fare better than others under the condition). Both have implications for programming for early college entrance.

COMMONALITIES AND VARIATIONS OF PRACTICES ACROSS NATIONS

This special issue presents four early college entrance programs (ECEP) across three nations, Australia, China, and the United States. They are, to be sure, just a small sample of many existing ECEPs (see Brody, Muratori, & Stanley [2004] for a list of these programs in the United States). Most ECEPs were established within the past 4 decades. These programs vary in their institutional policies and characteristics. Some target a particular population; for example, Mary Baldwin College's Program for the Exceptionally Gifted was set up for gifted girls at about the age of 13 (see Solow & Rhodes, 2012). Others accept a broader range of students. Some programs have a distinct science, technology, engineering, and mathematics (STEM) focus. Others maintain a liberal education orientation. These differences often reveal initial motivations for setting up an ECEP to accelerate

some precocious students. The impetus could be breaking the age-graded, lockstep education system in order to provide optimal educational experiences, as in the case of University of Washington's Robinson Center (see Hertzog & Chung, 2015, this issue). It could also be producing a pipeline of STEM talents badly needed for economic development of a nation, as in the case of the Special Class for the Gifted Young at the Science and Technology University of China (see Dai & Steenbergen-Hu, 2015, this issue). However, younger students admitted to college also face a common set of challenges, academically, socially, and emotionally (Brody et al., 2004). As a result, ECEPs can reveal distinct characteristics as well as commonalities in admission policy, educational provisions (mainly curriculum), and student support systems, arguably three pillars of the ECEP.

Admission policy reflects the mission of an ECEP and involves a set of criteria and procedures that define qualifications and eligibility for the program. For some ECEPs, the focus might be whether the applicant is deemed fit to pursue college studies ahead of time, because keeping him or her in high school may be inappropriate. For some ECEPs, selecting a group of exceptionally gifted students for early college entrance may be a priority because the goal is to make the most of their gifts and talents for the benefit of both society and the individuals involved. These two approaches reflect different priorities and perhaps different paradigms as well (Dai & Chen, 2013). Comparing and contrasting differences in admission policy gives us a sense of different rationales for an ECEP and practical consequences in selection criteria and procedures.

Educational provisions and adaptations reflect the mission of an ECEP and are the core of an ECEP, because they determine the scope and sequence of learning and educational experiences of early entrants. We might consider three broad dimensions along which the effectiveness of an ECEP curriculum (including extra curriculum) can be evaluated: scope, rigor, and flexibility. ECEPs might differ in terms of broad or narrow scope of education. Some programs are *specialized* (e.g., a STEM focus), and others emphasize a broader range of learning experiences that help develop the whole person. How a program balances priorities for early entrants' optimal development warrants empirical investigation (see Dai & Steenbergen-Hu, 2015, this issue). The second dimension is rigor. Some ECEPs might be more challenging, with higher expectations for their students than for others. What are the consequences of a rigorous program for its students? Is there evidence of better student outcomes? Will that increase competition among peers and lower one's self-concept and, consequently, achievement? The third dimension is flexibility. Rigor does not mean rigidity. If early college entrants demonstrate a diverse range of strengths, interests, and preferences, is the system flexible enough to adapt to the needs of early entrants by providing choices, opportunities, and resources that capitalize on their strengths and interests? In sum, variations in scope, rigor,

and flexibility may give us clues as to how well an ECEP has done what it is meant to accomplish.

In addition to admission policy and educational provisions, what kind of student support an ECEP provides also defines the quality of the program. Supporting students academically, socially, and emotionally is an important challenge, particularly for early college entrants, not only because they are younger than regular college students but because many of them likely skipped high school years and may have difficulty deciding what courses, majors, and academic directions they should take. A strong component of guidance and counseling seems imperative to support these adolescents' self-regulation, development, and personal growth while they navigate through the college years.

EFFECTIVENESS OF AN EARLY COLLEGE ENTRANCE PROGRAM: SHORT-TERM AND LONG-TERM EFFECTS AND PROGRAM EVALUATION

The effectiveness of a program is always of concern in an age of accountability. But often it is an issue more complex than meets the eye. Is a high graduation rate and low dropout rate a sufficient indicator of effectiveness, or should one aspire higher? Should we define *achievement* broadly beyond tangible grades, scores, or accolades? What should we expect in terms of long-term trajectories and accomplishments for such a program? This issue can only be answered when we ask what are the mission and goals of the program in question in the first place. In addition, the effectiveness of a program varies from individual to individual; as a rule, some would always gain more than others. In an extreme case, an ECEP might produce many successful stories as well as apparent failures. The differential effects ultimately reveal gifts and talents individual early entrants bring to bear upon whatever opportunities are presented to them.

It is less meaningful to ask whether an ECEP is effective or not in a categorical manner. Rather, a more meaningful question for program improvement purposes is how well the program has served its mission and what aspects of the program can be improved further regarding admission policy, program provisions, and support systems, among others. In general, an ECEP has to satisfy multiple practical constraints to achieve the set goals. It is conceivable that a program may be strong in some aspects but not in others of the system. Then, a closer look at program operations, curriculum implementation, the quality of support systems, and student learning experiences becomes necessary for improvement purposes.

More generally, the question can be raised as to whether an ECEP has an advantage over just early college entrance stipulated by the university policy. Given that many universities are willing to take early entrants, will an immersion

of early college entrants with regular college students be sufficient for early entrants' educational needs? What is value-added about these institutionalized, somewhat self-contained programs? The question brings us back to the initial impetus for setting up such programs in the first place.

A COMPARATIVE EDUCATION PERSPECTIVE

In addition to more pragmatic concerns and interests, this special issue is organized in the spirit of comparative education. Comparative education, broadly defined, compares specific education programming, provisions, and systems situated in different countries or regions. Beyond practical concerns, a comparative education perspective can yield more insights than any study of a single program can afford. It is common sense that we understand ourselves better by comparing ourselves with others. Comparisons carried out may involve what works or does not work well, what part of a program is strong and what may be lacking. But beyond the obvious, a comparative education perspective can shed light on core concepts and values underlying ECEPs across nations. Some of the belief systems might reveal culture-related differences and thus help put a particular program in the light of a larger social context. As mentioned earlier, priorities, values, and principles guiding early college entrance programming differ between countries or even between programs within a country. However, challenges related to early entrants' academic, social, and affective development will reveal universal issues and concerns as they relate to universal aspects of human development and individual differences, which presumably present a set of common educational needs and issues. Theoretically, we will have a better understanding of the nature–nurture issue with respect to promoting optimal development of precocious adolescents by finding common patterns and themes across nations.

Therefore, the articles in this special issue look at local practices with global issues in mind. Hopefully, by working collectively to identify commonalities and differences, we will be able to develop a common set of issues for improving research, practice, and theory, including how we can learn from each other in fashioning models of ECEP that can stand the test of time in serving the precocious youth.

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