Talent Development: A ‘MUST’ FOR A PROMISING FUTURE

Ms. Roberts points out that when we plan to establish P-16 systems, we must be sure that they are flexible enough to allow all students to learn what they are ready to learn when they are ready to learn it.

JULIA LINK ROBERTS

RE your children breaking an “academic sweat”? This question is essential, for it addresses the need to work hard to reach a goal. Parents and educators often resort to an analogy between athletics and academics in an effort to bring children around on the matter of the dual importance of hard work and talent. No athlete becomes a champion without facing challenges. No athlete excels without expert coaching. The same holds true for all talent areas. Schools that offer varsity sports need to offer varsity-level opportunities in academic and artistic areas as well.

In the movement toward an integrated P-16 system of education, we need to address a number of questions about talent development. Why is talent development important for society in general? What must be in place in a P-16 system in order to nurture the development of talent in a school and throughout a school system? And what must be in place to develop top talent? What factors erect barriers to talent development? In this article, I will meld key concepts in the development of talent and, indeed, the development of top talent, with the characteristics of an integrated P-16 system of schooling.

So what is talent development? The most basic model for talent development must see that each child has opportunities to excel at the highest level possible. The child who is working above grade level has ongoing opportunities to make progress. No one is limited in what he or she can learn because of age, but rather learning experiences are planned to match the level at which the child is ready to learn. Student talents are accommodated in a variety of areas, whether in academic subjects, in the arts, or in athletics.

Society needs talented individuals to create a bright future in our communities, states, and nation. Inventors, innovators, entrepreneurs, scholars, artists, and leaders are needed to solve local and global problems. In a world flattened by advanced technology, educators need to garner the resources and offer opportunities to ensure that all students are developing their abilities to optimal levels. Continuous progress is at the heart of talent development. Of course, all children need to learn on an ongoing basis; however, top talent is often overlooked. For the sake of our future, we must not let this happen.

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In his retrospective study, Benjamin Bloom examined individuals who had achieved international eminence in their thirties and looked at the factors that led to their achievement. He described teachers of young people at various levels of talent development: teachers at the first level create a love of the talent area and develop the basic skills; at the second level, teachers develop competence; and at the third level, teachers take the talented individuals to the level of expertise.

Numerous reports have called for the development of talent, highlighting the critical need for the U.S. to maintain its competitive position in the 21st century. In *Rising Above the Gathering Storm*, the National Academies Committee on Prospering in the Global Economy of the 21st Century identified just four actions federal policy makers should take to enhance the science and technology enterprise “so the United States can successfully compete, prosper, and be secure in the global community of the 21st Century.” The first is to “increase America’s talent pool” by vastly improving K-12 mathematics and science education, which carries implications for a P-16 system. And each of the four recommendations refers in its own way to the development of talent and the importance of innovation if the U.S. is to thrive in the global economy.

Writers, scientists, and politicians emphasize the tie between innovation and a bright economic future. Richard Florida states in *The Flight of the Creative Class*, “The competition for creative talent is heating up in all corners of the globe.” The National Governors Association and Arizona Gov. Janet Napolitano announced Innovation America, her yearlong chair’s initiative for 2006-07, based on the conviction that “United States economic growth in the 21st century will be driven by our nation’s ability to innovate.” *Tough Choices or Tough Times*, the report of the New Commission on the Skills of the American Workforce states:

> The best employers the world over will be looking for the most competent, most creative, and most innovative people on the face of the earth and will be willing to pay them top dollar for their services. This will be true not just for the top professionals and managers, but up and down the length and breadth of the workforce. Those countries that produce the most important new products and services can capture a premium in world markets that will enable them to pay high wages to their citizens.’

Nobel laureate physicist Leon Lederman, who is co-chair of the Commission on 21st Century Education in Science, Technology, Engineering, and Mathematics, puts it this way: “Not only do we have to have equity and close the famous achievement gap, we also have to have innovation if we’re going to survive, so you have to nurture the gifted kids.” The need to develop top talent echoes through national reports and the statements of leaders in various parts of our society.

Having talent does not guarantee that a young person will develop that talent and reach an exceptional level of expertise. Opportunities and resources of the schools, community, and home environment are required to encourage and foster talent. Talented individuals must have opportunities to learn at advanced levels. Resources include both human resources, such as teachers and mentors, and physical resources, such as laboratories and specialized equipment. Without chemistry laboratories and expert teachers and mentors, there are no Nobel laureate chemists. Such losses are both personal and societal. Thus talent development is important if both the individual and society are to reach future goals.

P-16 educators can play a leading role in the development of talent. What practices do educators engage in that foster talent development? How do we describe a school that is a good place for children and young people to develop their abilities, competencies, and expertise? What must be in place to develop talent to top levels?

A key factor for the development of talent is providing the child ongoing opportunities to work above the level at which he or she can easily perform. Instruction that is optimal will always challenge what Lev Vygotsky called the student’s zone of proximal development. Young people develop their talents best when they have opportunities to stretch in order to learn advanced content, refine skills, and expand expertise.

Talents do not develop to their fullest without instruction and without opportunities to stay focused on the process. In his study of talent development, Bloom made the following statement:
No matter how precocious one is at age ten or eleven, if the individual doesn’t stay with the talent development process over many years, he or she will soon be outdistanced by others who do continue. A long-term commitment to the talent field and an increasing passion for the talent development are essential if the individual is to attain the highest levels of capability in the field.

Thus, while exposure to the talent development area begins the process, ongoing opportunities to develop the talent as well as commitment to the talent area are essential for honing exceptional talent.

Individual effort is paramount in the realization of talent. Carol Dweck described one’s understanding of ability as the key determinant of success: “It’s whether you look at ability as something inherent that needs to be demonstrated or as something that can be developed.”

If young people are to develop their talents, they must not rely on their abilities but rather they must see the connection between effort and achievement. Students who believe that abilities can be developed are more likely to work hard at challenging tasks than are those who believe they have fixed levels of abilities. Effort is the essential component of self-efficacy. When learning at high levels is linked with hard work, great things can be accomplished. When failure is seen as the result of limited abilities rather than lack of effort, opportunities to develop talent are often lost.

In short, talent development depends on the acquisition of a work ethic. Reaching the next level of talent depends on having teachers continually direct practice and study to the next level. Young people who get good grades with little or no effort do not acquire the necessary skills and develop the drive to continue to the next level and ultimately to a very high level of performance. Schools that promote talent development have children learning at challenging levels on an ongoing basis so they learn the valuable skills needed for success in life. And a school system that adopts a P-16 focus and does away with artificial boundaries to students’ progress can help make such continuing challenges available.

What does a school “look like” if it has a focus on talent development? Teachers, counselors, administrators, and coaches are passionate about providing opportunities to ensure that each child — including those with exceptional talents — makes continuous progress. The school celebrates accomplishments in athletics, science, the arts, and service. One accomplishment is deemed no more important than another. Everyone cheers for those who excel.
Feedback becomes the mantra of the school that focuses on continuous progress and the development of talent. In academics and the arts as well as athletics, young people receive specific feedback about their performance in order to continue improving. Talent development is as important in math as in basketball, in writing as in track, in science as in football, in the visual arts as in leadership projects. All adults in the school understand the long-term benefits for all students when high-end learning is front and center. Talent development is not an afterthought in such a school or a response to an unexpected show of talent. Rather, it is planned for and intentional.

Schools that develop talent are characterized by a range of opportunities to recognize, develop, and celebrate talent in all areas — artistic, academic, and athletic. Passion for a talent area builds when a child is introduced to an area of interest and becomes highly engaged in the topic or area of study. The next step is to provide opportunities to learn basic skills and foundational knowledge. Such a solid background in the talent area prepares a student to turn his or her passion into a developed talent. Next must come opportunities to refine skills in the talent area as a student learns advanced content. When and how this step occurs depends on the interest and performance level of the child, not on age. The final step is scholarly or artistic production: the student takes the talent into creative production in artistic areas or in an area of research. This final stage is the goal for young people and is not necessarily related to age.

Without abundant opportunities for students to be introduced to ideas and content, talents do not surface. Without opportunities for recognition, talent areas do not flourish. But in schools that focus on talent development, ongoing opportunities to move from the early stages of talent development to the advanced levels of scholarly and artistic production are a part of the culture.

What can teachers do to create opportunities for fostering and developing talent in classrooms on an ongoing basis? What does the classroom look like? What are students doing?

First, the focus in classrooms, laboratories, studios, and athletic facilities is on learning, not on making grades. Pre-assessment is the key to knowing what students know and are able to do; consequently, data from the pre-assessments can provide the rationale for students to engage in a variety of learning experiences. Children in any classroom are no more identical in what they know and are able to do than they are in height and weight. Teachers who wish to create opportunities for their students to develop their talents create classroom environments that respect difference and celebrate the development of talent through a focus on strengths. Learning experiences are matched to what a child knows and is able to do; they are not limited to what a child at a specific grade level is expected to know and be able to do. Matching the learning experience to the child or a cluster of children is not an accident but is based on the pre-assessment.

Celebrating continuous progress for all children, not just for a portion of the students, creates an environment conducive to talent development. When educators focus on grade-level achievement as the goal, they are discounting the many ability levels in the classroom. In particular, they are not providing opportunities for their advanced students to continue their own learning. William Sanders has noted that the progress of high-achieving students has been retarded in many schools. To maximize the potential for learners, it is essential that achievement goals match the levels of readiness of individuals or clusters of students, including those at the high end of the distribution. Equity involves matching learning to individual need; it is not doing the same thing with all students of the same age. After all, school is about learning, and learning is the essential ingredient in talent development.

Educators in schools that are in the business of talent development recognize that proficiency is important if a student has not reached that level; however, they
ensure that young people who have exceeded the level of proficiency proceed to new, higher levels of learning. Setting a threshold for learning at proficiency or grade level is shortsighted, and the result is the loss of talent in many areas of human endeavor.

Keeping proficiency in perspective is important. If the child or adolescent has achieved proficiency or is above that level of achievement, the expectations and goals must be raised so the student learns what he or she is ready to learn. The goal of school is “helping students learn only what they don’t already know.” Proficiency is only a step on the way to expertise.

Educators who are talent developers know the importance of rigor, relevance, and relationships to learning, and they ensure that these factors are front and center in their schools and classrooms. Rigor is relative, of course, and content that is rigorous for some students will be too easy for others. Differentiating the curriculum is essential if all young people are to experience the joy of learning content that is rigorous but within their reach. Likewise, relevance will not be the same for all. Relevance involves tying what is being learned to what the students understand, have experienced, and value as having meaning to their lives. Finally, experiencing relationships is critically important in learning. Young people need time to learn with others who are equally interested in a particular topic or content. This means that students need to be flexibly grouped to have a peer group for learning. They also need relationships with special teachers or mentors — ones who encourage them to develop their talents, guide their learning, and create specific opportunities to enable that to happen.

All three — rigor, relevance, and relationships — are drivers toward high-level learning. The one-size-fits-all definitions of these terms do not allow room for talent development. What is rigorous, what creates relevance, and what builds important relationships must be examined in terms of particular students, their experiences and prior learning, and their interests in reaching high levels of accomplishment in a specific area.

Schools that facilitate the development of talent do so without regard to any factor other than the demonstration of talent or talent potential. They present opportunities for young people from all backgrounds to achieve at high levels on an ongoing basis. They view scheduling of students as the opportunity to address the learning needs of a child or a cluster of children: scheduling to accommodate learning needs takes priority over scheduling all children in a grade into the same options. When the goal is to ensure that all young people are making continuous progress, grouping and regrouping stu-

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both in and outside of school.” Interests may begin at home, in school, with mentors, in research laboratories, in university-based weekend and summer programs, or anywhere else that learning can occur. The key in talent development is to have adults who can nurture the interests and facilitate the development of skills for students who have the desire to pursue a given talent area. At the highest level of talent development, adults are the key to knowing how to be engaged in artistic and scholarly production.

Performances and competitions can be important venues for the development of talent. They provide real audiences for the young people to exhibit their talents. They provide incentives to work hard to reach the next level of talent development. Just as playing basketball in March tournaments brings out the best talent and effort, contests and competitions increase motivation in academic and artistic endeavors. Competitions come in various types and are offered for all types of content and talent areas. They may be art shows, creative problem-solving competitions, robotics contests, or recitals. Some competitions will be entered through school activities; individuals may enter other competitions on their own. Some are for individuals, and some are for teams. However, an opportunity is not an opportunity unless you know about it, and librarians, counselors, principals, and teachers bear the primary responsibility for alerting young people to opportunities to exhibit their talents.

Engaging in research is well within the reach of talented young people. Two prerequisites for research are having the academic background and having a mentor to show the way. An example of successful research can be seen in the team from Oak Ridge High School in Tennessee who won first place in the Siemens Math, Science, and Technology competition in December 2006. This group of students chose “Linking Supercomputing and Systems Biology for Efficient Bioethanol Production” as their topic. The school offers a thesis course that is an opportunity to engage in research, either as individuals or in teams, and it has offered this course for 25 years. In the thesis course, “students are paired with scientific mentors at the Oak Ridge National Laboratory, where they may choose from a rich variety of cutting-edge scientific investigations.”

Schools that offer such challenging research options allow young people to experience what researchers do when they study a real problem. While not all students will win national competitions, all who take part will have firsthand research experiences. An integrated P-16 system makes the necessary collaboration between practicing professionals at the Oak Ridge labs and talented local students easier to organize and accomplish.

Educators and parents need to ask, “How do our schools measure up in talent development?” and “Are our children breaking an academic sweat?” If “talent development is the ‘business’ of our field,” then we need to embrace that business for all children. While society regularly recognizes some types of talent, academic accomplishment is too often overlooked. Recognizing talent in all areas is important if individuals are to develop their potential and if our society is to advance.

A system that recognizes talent, differentiates instruction accordingly, and seeks to provide appropriate challenges for all its students will easily accommodate the kind of boundary-breaking, cross-sector collaboration that the Oak Ridge example provides. However, by minimizing artificial boundaries between the levels of the school system, an integrated P-16 system also enables all students to experience an education that challenges them at a level appropriate to their current state of learning and interest. The students deserve that opportunity. Can we afford to do any less?
