

Introduction: The Results of Research on Talent

Dr. Steve Clinton

Address to the *California Association for the Gifted* Conference, Santa Clara, 1987

The need to find effective ways to educate people with talent has been recognized for a long time. Even staying with this century we find Alfred North Whitehead saying that there are four cycles to the talent development process: romance with the field, precision in learning, generalization of knowledge, and cyclical growth patterns. This older model has served as a pattern for most forms of talent development, from piano to athletics.

In 1980 David Feldman wrote about elements of the process which results in talent development: universal achievement, spontaneous acquisition, invariant sequence, and hierarchical integration. The theory is that anyone who learns to perform a skill well will necessarily include these elements in the process of learning. We will see that this tends to correlate with the recent massive study, accomplished under the direction of Benjamin Bloom.

I. Characteristics of the Bloom Study

In 1985 Bloom's team completed a research study which included 120 people in six fields: piano and art, swimming and tennis, and math and science. They chose as the population 20 of the best 25 performers in the U.S. in each of the six fields. Surveys were taken with the individual, his or her parents and as many of the early teachers as could be reached. The criterion for choice included that the individual must have reached national prominence before age 30.

II. Phases of Talent Development

There were three distinct periods of learning in all six fields: early years (three to four years in length), middle years (three to four years in length), and later years (six to eight years in length). Only after these periods did the people reach national distinction. Thus, developing excellence in talent development takes from twelve to eighteen years of training.

A. The Early Years

The early experiences involve exploring and playing with the field of interest. In a majority of cases the playing was accompanied by approval or praise.

Thus the earliest experiences involved personal interest (whether initiated by the child or by the parent or teacher), fun, and positive feedback. This positive experience was nearly universal among the 120 subjects.

B. The Middle Years

These years are characterized by time spent on details, submission to regime and development of technical skills, as should be expected.

There was a strong desire to excel in the field and a persistent, eager competitiveness. This motivation was reinforced through a developing sense of competence and participation in performances and exhibitions. Thus the student is pushed to learn the more difficult technical aspects of the field, but there is continual reinforcement of the motivational aspects of training.

C. The Later Years

These years are characterized by psychological commitment and a growing intellectual grasp of the field, including both imaginative and integrative exploration. Students practiced in their heads as well as with their hands whether the field was piano or swimming. Practice was often six to eight hours; there were many competitions and a high level of normal achievement. Even then the teachers pushed. There was a high regard for the teacher and a teacher wanted the student to become one of the best in the field and was helping the student to become the level at which the students began to find and correct their own problems.

Less than 10% of the high achievers were identified as early geniuses or prodigies. Most did not achieve national prominence until after age 14. The sequencing of the three phases was more important than age or intellectual ability, until the last phase, when a high level of intellectual ability was demanded in the arts and sciences.

The common characteristics included the ability to learn quickly and well and a growing sense of being capable of high achievement. The latter brought with it both pride and responsibility. The phases were characterized by desire, commitment, sacrifice, and competence.

III. Environmental Factors of Talent Development.

Parents and teachers were the common elements who delivered the training and education to the students. The other elements of the delivery systems were so varied that the researchers did not feel any of them were unusually relevant.

A. Parents

Parents and home life were characterized by participation. In many cases the field of expertise was already shared by one or both parents. The parents participated in the child's development at all levels of growth.

1. The Early Years

The parents told the child the field was important and began to create the sense of value which would later sustain the child through the hard years of skill development. The parents engaged the children and prompted them to become excited about the field. Parents provided support in the form of material resources, attendance at training and performances, careful selection of teachers (parents did not take a child back, even twice, to a non-motivational teacher). The parents monitored the practice of the skill, looking for both quantity and quality of drill. Most of the parents were hardworking at whatever they did, and many shared the field of interest of the child.

2. The Middle Years

During these years the parents are called on to make the greatest personal sacrifices. Balancing schedules is a problem. Sacrifices of time, money and release of other activities which could compete are called for. They must decide if the child's talent is worth the costs. This puts both the parents and the child in a difficult position. If there are siblings, the cost of time and attention may be even greater. Family activities begin to revolve around the talented member. Family vacations and weekends are directed to meeting the schedule of competitions. Most of the direct contact is of support - smooth problems, encourage, console, laugh with, help make transitions - the parent is often beyond their own talent level.

3. The Later Years

The parental involvement is less now. The student and his or her teachers pick the next level of teacher to learn from. The parent commits money and time, and gives encouragement.

B. Teachers

1. The Early Years

Introductory teachers, whether at school or in the community, were characterized by warmth and encouragement. This fit the pattern of the early years being typified by positive experiences. These teachers like children, they give lots of praise and encouragement. The emphasis was on enjoyment and building a sense of growing accomplishment, no matter how slow the progress.

2. The Middle Years

The teacher provided sharp, structured drill and taught the logic of the discipline. They set high technical standards and would not accept less than mastery of the essentials. They helped focus the work of the student and told the student what was needed next in the student's development. They encouraged the student to enter competitions. Whether the student won or lost the teacher helped them see what they could learn from the experience so they could do better next time. The students respected the teacher and

responded to the teacher's belief that they could excel.

3. The Later Years

The teachers here are pros. They are at the top of the field and set impossibly high standards. The students feared the teachers, but were willing to pay a price because they knew how much they could learn from this master. The teacher led and inspired the student. The student learned to become self-critical and self-correcting.

IV. Conclusion

At least five lessons can be drawn from this study which are applicable to the parents and teachers of talented youth.

1. Many children can excel in skill areas. Achievers are not essentially different from non-achievers. Encourage all children while they are young to explore and have fun with a variety of skill fields.
2. Parents and teachers need to learn to create and sustain long-term commitments to learning. They will give the child a vision for involvement in the field. They provide the emotional support and sustained hope for success.
3. After the preliminary stage of fun/play, there will be years of day after day drill and practice. This needs to be made fun and challenging. There must be attention to detail and constant repetition until the basics and the strategy have been mastered.
4. There should be praise for personal commitment and for progress, although mere achievement (i.e.. winning contests) is less important. This personal encouragement is found at all three levels.
5. The cycle of romance, precision, generalization is a steady cycle for high achievers. It takes place at each phase of talent development and is necessary to prepare the student for the next phase.

Many students can become high achievers. Whether they will do so often rests with the parents and teachers who recognize and encourage small interests and progress. If this does not take place the student either will never develop the talent, or will have to have the additional raw determination to "make it" on his or her own.

Bloom, Benjamin, et.al. (1985). Developing Talent in Youth. Chicago: University of Chicago Press.