

On Talent Development: A Conversation with Benjamin Bloom

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Benjamin Bloom

What led you to study the development of immensely talented people?

I've been studying learning for over 40 years. My first set of studies involved differences among the states. We found that states varied enormously in the kind of learning they produced—and that the differences were quite stable. States that were low in—say—1940 were still low 40 years later.

Then we did similar studies internationally, trying to understand why students learn so much better in some countries than others. After that we studied extremes, for example, comparing learning when there was a teacher for 30 students with results when each student was tutored by a very capable teacher. In these many studies we were finding very positive effects of excellent conditions of learning in the home and the school—how teachers teach, and so on. I decided that the best way to understand the utmost limits of learning would be to study people who had continued to learn over many years and had become tops in their field. So this study of talent development is one of a long list of studies I had planned for many years.

At first impression it seems quite different from your usual focus. You have emphasized mastery learning, which is intended to equalize educational attainment. It would seem that it's quite a different manner to investigate the development of a small group of extremely successful people.



Respected throughout the world for his research on human growth and learning, for his conceptualization of mastery learning, and for his famous *Taxonomy of Educational Objectives*, Benjamin Bloom is one of America's most distinguished educators. In this interview, he comments on the findings of his study of the development of 120 young men and women who had reached the highest levels of accomplishment—Olympic swimmers, world-class tennis players, concert pianists, great sculptors, research mathematicians, and research neurologists—reported in his new book, *Developing Talent in Young People*.

I firmly believe that if we could reproduce the favorable learning and support conditions that led to the development of these people, we could produce great learning almost everywhere. The basic differences among human beings are really very small. On some kinds of learning we differ very little, but in others we differ greatly—especially for the types of learning that require enormous time, motivation, and the like. For example, our pianists studied an average of 17

years to become internationally famous concert pianists. It's very rare to find anybody devoting 17 years to any kind of continuous learning. **You're not saying that given the right circumstances, just anybody could be a great pianist or neurologist, are you?**

I don't really want to go that far. I would say that if the love of music is inspired in a country, then all the people in that country will learn music. For example, almost all Hungar-

ians learn to love the music of that country and learn to sing and play it very well. That doesn't mean that we have that many Hungarian concert pianists. In every nation and every endeavor, some excel over others because they put more of themselves into it. The point is that under favorable learning conditions most people reach a high level of excellence. What we need to consider is how to get virtually all to love music, to enjoy art, to learn mathematics, or whatever.

An unavoidable problem with the kind of retrospective research you've conducted is that there are not, and cannot be, control groups. Is it possible that other children raised in similar ways are less successful and that the people you studied actually succeeded because of some undiscovered factors?

Well, I think the study tells us some general things that apply across the board. We at one time thought that the development of a tennis player would be very different from the development of a concert pianist or a sculptor or a mathematician or neurologist. What we've found is that even though the content and the procedures may be enormously different in each field, there is a common set of characteristics in the home, the instruction, and the like. There is a very general process that seems to be central to the development of talent no matter what the field. My students at Northwestern University are now studying other talent fields such as poets, authors, and concert singers, among others, and they're finding much the same processes at work.

It is quite true that we've only studied the successful people and haven't asked much about the unsuccessful. However, we did study a small group of people who didn't quite make it to the highest level, and we found that there were a number of chance or accidental conditions that seemed to get in the way. For example, one person was as good by age 15 as the best of our tennis players, but when he chose a college he didn't inquire about the tennis coach. When he arrived at the college he was amazed to find that it did not have a good tennis coach. That sort of thing didn't happen to the extremely talented people we studied. Each new step was planned

very carefully with the help of former teachers, experts in the field, and the parents.

What I'm saying is that two individuals can be at almost the same level at age 15 but one goes on to the championship and the other doesn't because of certain learning and support conditions.

What should parents know as a result of your study? What can educators help them understand about developing talented children?

What we're finding is that parents' own interests somehow get communicated to the child. I guess it's a little like the way religious parents' interest in religion gets communicated to their children. They don't ask their 5-year-old, "Would you like to learn the various things you need to learn to be a religious person?" We don't ask a child, "What mother tongue would you like to learn?" Everybody takes it as natural that if the parents' major language is English, the children will learn to speak English. Similarly, we found that the talent which was later developed so highly—music, for example, or swimming—was something that the parents thought was "natural" for their children to learn and enjoy.

But it went beyond that. We found over and over again that the parents of the pianists would send their child to the tennis lessons but they would *take* their child to the piano lessons. And we found just the opposite for the tennis homes.

Your book also says, I think, that parents of these highly talented people had strong achievement motivation.

Yes, we found that almost all the parents embraced the work ethic. They insisted on things being done well. They expected that one should work before one plays, that one always tries to do his or her best, and that each try should be better than the one before. Virtually all these parents seemed to embrace this idea and to communicate it to their children.

Do your findings suggest ways educators can develop the talents of the children they teach?

Well, they do a very good job in sports. There's nothing we can tell coaches in high schools and colleges. But when we get beyond sports, things are sporadic, accidental. Students may

have a good teacher one year and a very poor one the next. And even in the academic subjects, all kinds of chance circumstances are at work.

For example, our mathematicians had great difficulty with teachers who insisted that they must learn math exactly as it was written in the book. A student may have been doing calculus on his own while he was expected to learn algebra by rote. Schools do not seem to have great tolerance for children who are out of phase with other students in their learning process.

Are there other things educators can gain from this knowledge of how people develop talent?

When educators try to develop talent, they often go about it by looking for the one in a hundred or the one in a thousand rather than expecting that virtually all can learn a particular talent field satisfactorily, and that the best will go even further. I think schools are wrong if they are highly selective in providing special learning experiences.

Are you saying it's not a good idea to use screening devices to identify talented students?

I am not opposed to screening devices to discover talent in order to do something about it as long as the instruments measure performance and achievement rather than particular "aptitudes." We in this country have come to believe that we can tell who is going to become a great musician by giving musical aptitude tests, who's going to be a great mathematician by giving mathematics aptitude tests. Doing that counts some people in and others out far too early.

What is a better approach?

All the children should be given opportunities to explore fields that they might be interested in. Then gradually the students can narrow their interests to particular fields, learn them to a high level, and develop a long-term commitment to one or more talent fields.

I believe your research found that those who became highly talented in a field were usually introduced to that field in a playful way. Does that suggest that children's encounters with school subjects should be playful at first?

Alfred North Whitehead wrote about that in 1929 in *The Aims of Education*, and we discovered it when

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we were about halfway through our study. Whitehead believed that there are rhythms of learning. For example, no matter at what age you start learning science, you should begin to learn it playfully, almost romantically, with wonderful teachers who make it exciting and interesting. Then, one moves to what Whitehead called the stage of precision, where you learn the underlying principles and develop great accuracy and skill in the field. That allows you to move to a third level, where a master teacher helps you to develop new ways of looking at the subject, new ways of participating in it, and your own unique style in the field.

Whitehead thought this had nothing to do with age; it had to do with the way you introduced a subject like mathematics to any learner. In most schools, we ignore what Whitehead was trying to tell us. We begin almost all instruction with precision and accuracy when we should begin with something more exciting, romantic, and playful.

Your study of highly successful people does help us understand, then, how all students could be more successful.

I am confident that virtually all people have enormous potential for something. The problem is to find some way of unearthing what that is and to make it possible for them to excel in the things they find most interesting.

I don't mean that all of them could or should become world-class performers in a particular field. We could, for example, produce a million great pianists—but we probably don't have a need for that many concert pianists. Nevertheless, almost everyone can enjoy making music, and it is worth learning for its own sake. Not many people are going to become professional musicians or champion tennis players, but many more people can learn these and other valuable things if we improve the *conditions for learning*. □

Reference

Bloom, Benjamin S., ed. *Developing Talent in Young People*. New York: Ballantine Books, 1985.

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