Chapter 6
Flow and Education

Part One

David [Kahn] is right, I told him that everybody should call me Mike, but at the same time, I will repeat my last name because otherwise people ask me always after a talk, "OK, but how *do* you pronounce your name?" So let me do it once, but after that it can be Mike, The last name is pronounced *CHICK-sent-mee-hi.* It's really made up of four parts: *Csik* is a province in Transylvania between Hungary and Romania, so *Csik* is a place. *Szent,* in Hungarian, means "saint," *Mihaly* means Michael, and the *i* at the end of the last name means "of," like "of Saint Michael of Csik." My family, in fact, comes from that little village in Transylvania, but, to anticipate some other questions later, we are not related to Count Dracula. It's a different branch of the family; we don't interact.

But there is an interesting little connection with the village of Csikszentmihalyi, which is still there, which I have never visited because I was born outside of there. One of my cousins who was there sent me a picture of the entrance gate to the school of the village. The gate is made of carved wood, very ornate, and on top of thé gate, these words are carved: "*A Tudás gyökerei keserüek, de gyümölcsei édesek.*" I don't know if I have to translate—probably not—but what it means, if you translate it into English, is that the roots of knowledge are bitter but its fruits are sweet. That really struck me, when I saw the photograph a few years ago, because for over 30 years I have been trying to demonstrate the opposite: namely, that the roots of knowledge do not necessarily have to be bitter. I was convinced of

M. Csikszentmihalyi, *Applications of Flow in Human Development and Education*,
DOI: 10.1007/978-94-017-9094-9_6, © Springer Science+Business Media Dordrecht 2014

that from my own experience and from that of others—I knew that somehow the acquisition, of knowledge can be a tremendously exciting and enjoyable process. The reason that we carve those words on schools is that schools themselves make knowledge bitter, not because knowledge itself is such.

This was an interesting, serendipitous occurrence, but, as I mentioned, for over 30 years I've been trying to understand the kind of enjoyment that I notice people who are working with passion on some kind of work—artists, scientists—demonstrate during their work. I have been trying to understand why that cannot happen more often. In schools, why don't the majority of children respond to learning with the same enthusiasm that creative artists whom I studied for my dissertation back in 1962 had—this kind of tremendous involvement with whatever they were doing, the focus on their work, and the ability to work for days without interruption. I was trying to see how that involvement, excitement, enjoyment could be generalized to children in schools across the board and not just be the privilege of these creative individuals I studied.

Motivation and Learning

My approach to learning is not the cognitive approach, which most of my colleagues in psychology have been pursuing for the last 40, 50 years, because I don't think the problem with children is that they don't understand or that they can't cope intellectually with school. I think the problem is that they don't want to get involved, they don't want to learn. I think the problem is affective, emotional, motivational, and not intellectual, not cognitive. I think we fell into the trap—and when I say w*e,* I mean psychologists who are studying children and learning—we fell into the trap of using the computer not only as a tool but as a model of how people think. While there are some similarities in the way computers and humans process information, there is the basic difference that a computer will start crunching information the moment you plug it into the wall, but a child will not. A child will be able to resist being "booted up," to use computer terminology.

Let me give you just one simple example of the kind of research that I have been doing, so you understand where I'm coming from, because my work is really basic research; I'm not an applied psychologist. So I'm trying to figure out how things work without, myself, trying to do much about it, but hoping that others will adapt and use what I find. One of the studies we did was to give teachers little electronic pagers that were programmed to go off at random moments during the class period.

We asked the teachers, when the pager went off, to write down what they were doing and what they thought their students were thinking about. At the same time, the students, who also heard the pager go off under the teacher's desk, would write down what they were thinking about and how they felt about various things—how much they concentrated, how happy they were, their self-esteem, and various dimensions.

The following example is one that, unfortunately, is very typical, and probably you, being teachers, know about it, although probably not as much in Montessori schools as regular schools. This was a class in which the teacher, a very good, respected teacher of history, was describing how Genghis Khan moved down in 1215 from Mongolia and tried to conquer China but bumped up against the Great Wall and so had to go all the way down south and then turn around and go up north on the other side so that he sort of outlined the Great Wall, and he finally got to what now is Beijing and took over. When the pager went off, the teacher wrote down that this was what he was talking about. This was what the students were thinking about: Of the 27 students in the class, 25 didn't mention anything vaguely connected with China; they mentioned their dates, their coming football game, how hungry they were, how sleepy they were, etc. There were 2 who mentioned China; one of them said, "I always wondered why Chinese men wore their hair in pigtails," and the other one said, "I was thinking about this great dinner we had with my family at the new Chinese restaurant." There was no mention of Genghis Khan, 1215, the Great Wall—none of that.

This is the problem we find ourselves in, in teaching, that we have all the information—we have all the tools for providing information—but that information is not going to make any difference unless it's attended to, unless the student allows that information to come into his or her head, I have been always intrigued by the question of motivation. What makes people want to process information or do any other thing. And that's where we come back to the question of creativity, because that's where I started asking about these issues, in looking at creative people. Although we'll talk about creativity much more tomorrow, let me just read two excerpts from interviews I made with two very famous inventors, very successful physicist-inventors who have developed things like the commercial application of jet engines. This is an 82-year-old man who is still involved in inventions. The other one, 76, has over 100 patents. This is what he says, the physicist-inventor:

> Oh, I love to solve problems. If it is why our dishwasher does not work or why the automobile doesn't work or how the nerve cells work—anything. Now I am working with Peter, my assistant, on how the hair cells work. And it is so very interesting. I don't care what kind of problem it is; if I can solve it, it is fun. It is really a lot of fun to solve problems, isn't it? Isn't that what is interesting in life?

So that is a typical answer from, in this case, an over-70-year-old man who, after developing all kinds of patents, becomes interested in how the nerve cells work. I don't know why, but that's what he is interested in.

Here is another one. He is in his 80s, still working on literally hundreds of new patents. He has 2,000 projects filed in his work room, which looks like a library, and has worked on these 2,000 patents on and off. He says:

> Yon invent for the hell of it I don't start with the idea, "What will make money?" This is a rough world; money is important. But if I have to trade between what's fun for me and what's money-making, I will take what's fun.

He acts, and all of these people act, on what they are saying. They are actually practicing what they are saying. This is what I suppose would be, in terms of the Montessori language, the normal way people learn, or the normal way to respond to problems, the normal way they get involved with things that are new and interesting and mysterious. Of course, we know, unfortunately, this is not the norm after the child starts going to school and begins to think that learning is something that has to be resisted and fought.

The Flow Experience

Let me go back, then, to this experience of enjoyment and fun that these people mention they get from getting involved in their work. Originally I interviewed some 100 people working in areas like art, music, and dance, because these people were obviously doing things for which they didn't expect to be rewarded, but they still spent enormous amounts of time and energy practicing these activities. I figured that, in the practice of these activities, there must be something which is so attractive, so enjoyable that you give up the pursuit of the traditional rewards like money and status just in order to be able to experience that activity. This—what I ended up calling the flow experience—is what you feel when you're doing things that are so enjoyable that you want to pursue them for their own sake. And, of course, the question is how can we apply what we learn from these artistic and aesthetic activities to everyday life?

The Conditions of the Flow Experience

1. **Goals Are Clear**—*One knows at every moment what one wants to do.*
2. **Feedback Is Immediate**—*One knows at every moment how well one is doing.*
3. **Skills Match Challenges**—*The opportunities for action in the environment are in balance with the person's ability to act.*
4. **Concentration Is Deep**—*Attention is focused on the task at hand.*
5. **Problems Are Forgotten**—*Irrelevant stimuli are excluded from consciousness.*
6. **Control Is Possible**—*In principle, success is in one's hands.*
7. **Self-Consciousness Disappears**—*One has a sense of transcending the limits of one's ego.*
8. **The Sense of Time Is Altered**—*Usually it seems to pass much faster.*
9. **The Experience Becomes Autotelic**—*It is worth having for its own sake.*

But before we do that, let me talk a little bit about what these activities are like. After I did these original interviews, we went off and, with colleagues around the world, we collected over 8,000 interviews in various cultures—in Japan, Korea, India, as well as Europe and many other places. We were able to extract from all of these interviews certain conditions that seem to be always there when a person

really enjoys what he or she is doing, when a person wants to do something for its own sake, regardless of whether they get rewarded for it in any other way. This is that flow experience that I would like to describe now. Originally, as I said, I started studying artists, then went, to look at athletes, mystics, and finally ordinary people. When we started studying these flow experiences in everyday life, I developed the Experience Sampling Method (ESM), the method of using electronic pagers so that we could collect responses from everyday life—so we can pinpoint very precisely how and when people do feel this type of experience.

The first thing that people report that happens is this extreme concentration and focus, what some people call one-pointedness of mind—the opposite of what happened, for instance, in that classroom that I described with China. In everyday life, it's not very sure that your body and your mind are in the same place. You may be sitting with 30 students in front of you and you assume that just because their bodies are there that their minds are also in the same place. But that is rarely the case; you don't have this merging of action and awareness, this merging of mind and body. But when you are in flow, that begins to happen. You begin to become so much a part of your actions that your mind cannot have a chance to go off on tangents, to think about a date or a football game or lunch. The point is that human attention cannot be split more than a very few ways. For instance, if there are four people around us talking, each one talking to us, how many conversations can we actually listen to? Not more than two. Some people can process three streams of vocal information, but that's very unusual. Usually we can process or pay attention to two streams of input and understand what people are saying. That is true of any type of information. We cannot think about how we feel—for instance, how hungry we feel—and at the same time, say, balance the checkbook or sing a song. We either do one or the other. There is very little we can do to overlap streams of information. That's why the focused concentration means that you are only paying attention to what you are doing right there, and all of your attentional processes and capacities are used to do whatever you are doing.

When the concentration reaches a certain point, people begin to feel the condition that often is described as "ecstatic." *Ecstasy* sounds like a very mystical term, and it can be that, but in its original Greek sense, *ecstasy* simply meant "to stand to the side" or "to step to the side." The experience of standing to the side is that you are not a part of the routine of everyday life anymore. All of us have to follow certain routines. We get up in the morning, we turn off the alarm clock, we brush our teeth, we do a whole series of things from breakfast, driving to work, then work. All of that is ordinary, everyday life. But we cannot live just by doing that. Otherwise, we become a robot; we become a machine that's driven by the needs of the body or the social needs. This ability to have an experience of ecstasy is essential to survival in any culture. In fact, if you think about it, in almost every culture that we know about, from ancient Greeks or the Mayas or the Egyptians or Chinese, everything we know about those cultures, everything that remains—the architecture—is all about ecstasy. We have temples, we have sports arenas, we have theaters that have survived. All these places are places to experience ecstasy, to step outside of everyday life, to have a chance to reflect, to experience a

different way of living, whether it's hearing a symphony or seeing a theater performance or praying or being in a religious context, these are all ecstatic experiences. The interesting thing about people who get into flow is that they don't really need the architecture or the social organization of ecstasy; you can get into an ecstatic state under your own steam, so to speak. You can make it happen; you can find it partly by simply the concentration that you are achieving, which cuts you off from the normal stimuli of everyday life.

One other characteristic that's very important is that when people get really involved in something that turns out to be enjoyable, they do it partly because they know very clearly what they have to do from one moment to the next. For instance, if you are playing a musical instrument, you know which note or which chord you want to play next, just second by second, so to speak. If you are playing tennis, you know where the ball has to go every time you hit it with the racquet. This clarity of goals is very important. It is not just the goal to succeed at the end of the game. For example, a climber's goal, if you are a mountain climber, is to get to the top of the mountain; that seems to be the goal of climbing. But that's really not what makes climbing enjoyable; it's every step that you make, and where you have to figure out where to put your foot down, how to use the hand-holds—those little goals are what directs your attention, what makes you able to focus—not the overall goal of getting to the top of the mountain. That's too far; you can get distracted by it. And the same thing in everyday life: If you have a goal to get along with your son or daughter, that's an overall goal, and it's very vague. The point is to break that goal into doable, clear steps that you can pay attention to and focus on and from which you can get feedback.

That's the next part. In flow, a person always knows how well they are doing. If you are singing or playing a musical instrument, you hear the sounds you are making and you can correct yourself; you can improve on your performance. Same if you are playing a game—tennis, let's say—you see where the ball is falling all the time so you get feedback. It's because of the clarity of goals and immediate feedback that the attention keeps getting carried and focused. If you don't get feedback, if you don't know how well you are doing, then you might start getting distracted. Your mind has a chance to pay attention to other things because it doesn't have to monitor the information coming back. That's how distraction comes. Distraction comes by not knowing what you have to do and by not knowing how well you are doing. These are all things that contribute to the concentration and that make the concentration possible, in a sense.

Another thing that everybody mentions is that they feel that what they are doing is more or less possible to do, given the skills they have. Another way of saying this is that the opportunities for action are in balance with the capacity to act. To make it very simple, the challenge and skill are in balance. If there is too much to do, if the demands are too high, the challenges are too high, you begin to feel anxious. If the challenges are too low, given your skills, you begin to feel bored. Being able to keep that balance is very essential. These are all things that you find in games, in artistic performances—for instance, if you are playing tennis, again, you are not going to play very often against somebody much better than you or

much worse than you. You try to play against somebody at your own level of ability. The same thing in chess: You always try to play against people on your own level; otherwise, it's not fun- You either get anxious or you get bored if you play against people on a different level.

Games and art forms are, in a way, engineered to make this balance possible and to give clear goals and to give immediate feedback. In everyday life, we don't have that. In everyday life, things are much more shapeless, amorphous; you don't know exactly what you have to do moment by moment, or you have too many things to do or too few. And so the question is, yes, we have ways to get into ecstasy through art, through games, through sports, but we don't know very well how to get into ecstasy in everyday life, in the kind of things we have to do which are not sport, art, etc., but are work or family life. There we are kind of helpless. We begin to feel bored or anxious. The whole purpose of this inquiry as to what makes flow possible is to see how we can apply it to everyday life, to work, to school, which are not structured to make flow happen, but where you can make flow happen if you know how to do it.

When those conditions are present, people begin to report a sense of serenity, of losing the worries of everyday life—the kind of worries that in everyday life kind of hang on your consciousness, that slow you down and make you feel depressed. Those worries disappear. Again, it's very simple why they disappear. They disappear because you don't have enough information-processing capacity both to pay attention to what you're doing and to worry. You can't do the two at the same time. If you are an athlete who is running in a competition and you start worrying about your exams or your love life or something, you're probably going to slow down compared to the others. If you are climbing a mountain and you start worrying about your income tax, you might fall down a few thousand feet. This is a simple result of the concentration that is required when challenges and skills are in balance, goals are clear, and feedback is there. Then you begin to get immersed in what you are doing and you forget the usual problems. One of the things you forget is your self, in the sense that the ego, the kind of facade that we all try to present to the world, no longer matters, because, again, that's not something you can think about while you are doing these things.

Why is that important? It's important because we find, especially with the beeper technique, that the worst moments in people's lives are when they become self-conscious: when they look at a mirror or even if they walk in front of a store window and see themselves reflected. Those are the moments when we start worrying about getting fat, getting old, losing our hair, or, if you are a teenager, about getting pimples on your face, or whatever. Even if there is no mirror and there is no store window, most of us are always aware that people are judging us and they are saying, "OK, he's kind of not very smart; he's not very good-looking; his tie has grease spots on it," whatever. The fact is, self-consciousness is a real burden. It's a burden that all of us carry in everyday life, and it makes us defensive and feeling inferior. This happens to children in school a lot. They are always worried about what their peers think about them. This self-consciousness in the classroom is one of the reasons why they don't process the information the

teachers give, because there is this barrier of the attention being spent trying to look smart or look cool or look whatever. That takes away the attention that, ostensibly, should be used to process information.

That is one outcome of flow, that the ego or self-consciousness disappears. But there is an interesting paradox there, because after an experience of flow, people experience their own self as being stronger and more vital than it was before. In a sense, the sense of the self disappears during the experience but afterwards comes back stronger than it was. Not only that, but there is even very often a sense of transcendence, that is, that you are no longer alone within your own little defensive self, but you are part of something bigger, larger. If you sing in a choir or play with a group, a symphony or something, one of the most obvious things that people report is that they experience their own voice, the music they are making, as now being part of a much larger unit and it's a feeling of expanding the boundaries of the self. Of course, in religious experiences, that's very common. But it's also common in artistic ones, in sports, when you're part of a team and everybody's working together, or if you're dancing, the choreography brings you in with others into this kind of system which is larger than yourself. That transcendence of going beyond the boundaries is a common experience. Even surgeons, who are, among professionals, some of the most addicted to the flow they get from the profession—they like to cut up people, they like to sew them back together—one of the great things about surgery is the teamwork that happens when everybody—the nurses, the technicians, the anesthesiologist—are all meshing together into a greater unit.

Another thing that is always reported is that time seems to fly, that hours pass by in what seems like minutes. Again, this is part of the same syndrome, namely, you are no longer monitoring the passage of time because you are too involved in what you are doing and therefore time adapts to your experience. It's no longer something that you have to worry about, a hand on a clock moving around, in fact, sometimes it's the opposite experience, For instance, figure skaters do one of those triple-toe loops or some very difficult move which takes a fraction of a second, but they experience it as expanding to minutes, to almost a quarter of an hour, because they see so much in that short period—so much is rushing in and so much attention is focused on that movement that it seems to take a long time. It's not necessarily that it goes faster. What is typical, though, is that what you do dictates how you experience time instead of the watch telling you what time is like. Again, this is something which, in everyday life, we may experience—time slowing down and speeding up—but usually we have to really watch the clock and let the clock decide how much time is passing, not how we feel. That's one of the obstacles to getting involved in flow, especially in schools.

The interesting thing is that when those conditions are there, people tend to want to do what they did to get that feeling, even if there is no other reason for it except to experience it. In other words, the activity that produces flow becomes its own reward. You may start out hating what you're doing. Many people, for instance, including myself, resisted using personal computers for a long time because I like to write; I like to look at my handwriting, and I like those big yellow legal pads that I use to write on. But once you begin to use the computer and you

see the options, the opportunities, and you develop a little skill and you begin to see what you can do with it, then you can begin to enjoy it and you become addicted to it That's why that last condition is so important, because it tells you that you can, in a sense, change things around, that you can start with something that the child doesn't like to do or is prejudiced against or feels inferior to, but if you can make the other things come in—the clarity of goals, the feedback, the balance of challenge and skill, the uninterrupted concentration on it—you have a chance. It won't work all the time, of course, but there is a much better chance for a child to take on this activity which didn't make much sense at first and to get involved with it

These are the major conditions that people report all over the world. It's not just Americans. It's amazing how universal it seems to be, regardless of social class, education, culture, gender; this phenomenon, this inner state, seems to be universally present. What people do to produce these conditions may vary a lot. In some cultures, there is much more meditation that produces this—let's say, in northern India, if you ask people, "Do you ever feel these things?" they will tell you probably that they feel it by doing some meditation or some yogic practice. In other cultures, they may do it by racing motorcycles or, if you talk to Navajos in New Mexico, they will tell you that they feel this by following the sheep on horseback. So the kind of conditions that produce it may be very different, but whenever a person is doing something which they enjoy doing and they want to do it for its own sake, they seem to come up with the same kind of experience.

Matching Challenges and Skills

As I said before, two of the most important parameters for the flow experience are the challenges that the person reports and the skills that the person possesses (see Fig. 6.1). When the challenge is much higher than the skills, or the opportunities are much greater than the capacity of the person, then you would expect anxiety to result. In the opposite situation, where you feel that your skills are not being used, that there is no opportunity for you to express your skills, then you would be bored. The flow experience seems to occur in that diagonal; in fact, it does occur in the diagonal where there is a kind of one-to-one ratio between challenges and skills.

The reason I have apathy down here is because of what happens—and this is something that we didn't expect, really, but we found out through empirical research—we found that once you develop skills in an activity and you have moved up and you've developed a high level of skills and you have high challenge, to have to return down to what you were doing before is almost impossible, If you do, you feel a sense of apathy and not flow anymore. For instance, when you start playing music, let's say the piano, you have very few skills, and at that point you can get flow by just trying the scales and being able to do the scales. But as you develop the ability, now you can do the scales very well. Your skills have improved. Now it's no longer flow; it's boring. So at that point, you have to up the

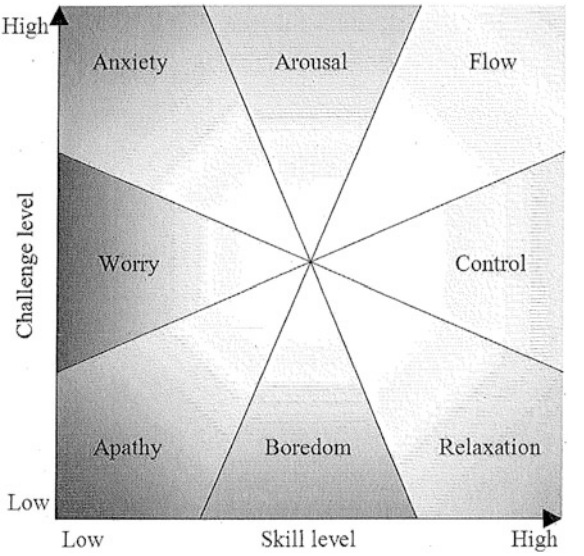

Fig. 6.1 Ratio between challenges and skills

challenge; you have to start playing a piece that gives you more challenge, a piece that is more difficult. Typically you move up that diagonal slowly. You get a little anxious because somebody gives you a piece to play, let's say, that you've never played before, and it's difficult, so you feel anxious. If you want to go back to flow, you have to develop skills to do it. If your skills are too high, you have to get the challenge up. Generally, we move up like that, step by step, getting out of flow, getting back into flow. But once you have learned to play Beethoven and Bach, playing "Three Blind Mice" is very frustrating.

When we do our studies of everyday life, with those electronic pagers that I mentioned, we can establish over a week's period—each child, for instance, fills out a form 50 times—how much challenge they find in whatever they're doing and how much skill they have, whatever they're doing. For each person, we can find the average level of challenge and the average level of skill for the week. Each person will have a slightly different average. We can put all of these averages together and identify at least eight different combinations of challenge and skill over the week. We have, now, about a quarter million of these responses, not just from students but from adults and so forth, and we find that, in fact, most positive experiences of flow occur when both challenges and skills are above their average point.

When they are in this other situation, they feel something that we would call control. They feel fairly happy; they feel in control because the skills are high and the challenges are not so high. Here, this is a condition of relaxation. This is where they feel bored. This is where they feel apathetic. Here they begin to feel worried because the skills are low and the challenges are starting to go up. So there is worry here. Here is anxiety. This position, where you have middling, average

skills, but high challenges, is what we call arousal because people there show signs of wanting to do something, feeling that they are pressured or stressed, but it is not anxiety. Anxiety is when you feel your skills are very low.

The interesting thing is that the best overall feeling is when people are in flow, of course. That's when they feel everything: They feel happy and they feel concentrated. When they're in arousal, they feel concentrated but not happy. In control, they feel happy but not concentrated. So in flow everything comes together. But arousal and control are two good positions to be in for learning because these are the two positions from which people can move easily into flow. From arousal, of course, all they need to do is get a little bit more skill and they will be in flow. From control, all they need is a little more challenge and they move into flow. Those two situations are *almost* as good as flow. They are not quite as good, however, and that's why flow keeps attracting people to improve skill and improve challenge.

But most of everyday life is really spent in these other areas, we find. A lot of it is spent, for instance, in apathy. What do you think people would be doing when they are signaled and they respond that they are in apathy? What kind of things would they be doing? TV is the majority of these. The other is sitting in the bathroom. About 70 % of the time you are watching TV you are here. There is some flow in TV, when you are watching a sports event or a good drama, not watching the news, usually. Boredom is usually when you are doing maintenance activities—washing dishes, dressing, shopping for food, etc. That seems to be mostly here. Relaxation is mostly with family, with friends, social situations, or reading for pleasure. Worry and anxiety happen a lot in school; they happen a lot on the job.

In school, by the way, there are certain subjects that are much more likely to be in the anxiety region, as you would expect. Math and science tend to be there. Social sciences and humanities tend to be here, in boredom. But luckily, occasionally, school subjects are in flow, and that's really what the whole enterprise is that we are all about—I think you as well as I—to try to make as much as possible of the productive activity kids engage in happen in flow. Because people will seek out flow anyway. If they can't find it in school, they will find it somewhere else. And very often they find it at the arcades where they play video games or, if you are less lucky, they will find it by breaking into cars or burning down buildings, which also produces flow.

Flow is not necessarily a good thing for society. Flow is like energy, and energy you can use to cook a meal or to burn down a house. You can use it for good or bad purposes. Flow is a source of energy which people seek out, and I think the goal of educators is to make sure that the flow will be directed, the energy will be used for productive purposes and not destructive ones. That's nothing new, really, because that's what Plato said 25 centuries ago, that the main task of educators is to teach young people to have pleasure in the right things. Somehow we have forgotten that. We think that we can force down the throat of children the right things, that somehow just by making them afraid or disciplined, they will absorb these things. They may do it, but under duress, and then the need for flow will manifest itself in

ways that are destructive. Those are some of the parameters of what I will be talking about, and since it's been an hour, I'd better stop right here.

Part 2

I want to continue talking about the conditions that make flow possible, although I mentioned some of them before. But up to now I was talking more about the quality of experience, what people actually report when they are in flow, that is, the characteristics of the flow state. I think you probably have already applied in your mind the notion, "OK, if those are the characteristics, then this is what we have to do in order to make them happen." But just to make sure, let's go through what those characteristics are that facilitate the flow state. These are not going to be very specific because to make them happen specifically you have to know what activity you are involved with. Of course, as teachers, you have certain common problems, common tasks to accomplish. Depending on what it is that you are trying to do—whether it's science or math or music or humanities or literature—you have different tools to work with. Your problems will be somewhat different depending on the kind of children you are working with, the kind of subject matter, even the kind of room you are working in, the kind of educational supplies you have. My task is to give you general principles that can be applied across the board, not only in schools but also in jobs and in your personal life. How you apply those principles requires your own creativity and your own thought. In the question-answer period, we can go more into detail; if you want me to try to be specific, I will try to be. But in my presentation I will give you more the general principles, the general conditions.

Characteristics That Facilitate Flow

In terms of what we talked about before, it's of course clear that one of the things that you would want to do as a teacher is to put yourself in the shoes of the students and figure out how you can make the child understand why this particular task is important. Many times, children will learn what they're learning on faith, to put it kind of bluntly. They don't really understand why they should be learning this. They don't know what the purpose is, even to do square roots or the purpose of doing calculus or the purpose of learning grammar. These are things that, for them, are really pretty foggy. Often they are foggy to the teachers, too, I must say, but if you don't know why they are doing it you'd better find out and then try to communicate it. All kids going to school know that they're going to school because by going to school then 13 years down the line they will go to college and then innumerable years later they will get some diploma that will give them a job and they will be able to practice as doctors or lawyers or engineers or whatever

they decide to do. Those goals are clear, but they are so remote that they have really nothing to do with this moment this class, this particular moment of the day.

Your task as a teacher, I think, is to bring those goals alive moment by moment, not just in terms of "OK, if you are a good boy or girl, 20 years from now you will enjoy this education; you will make some use of it." If that's the only goal, you can bet that the kids are going to be bored or out-of-it for a long time. Of course, when they finally get their education and get their diploma, they will start on a whole new set of future rewards. They will say, "OK, you are starting now as a junior member of this profession and maybe 20, 30 years from now you will get your rewards." It's always in the future. It's always 20 years from now, It's always 5 years from now. If you don't learn to enjoy the moment, if you don't know why you are doing it moment by moment, you keep postponing the rewards of life. You keep postponing the payoff for what you're doing and you end up fairly miserable, knowing that you have wasted all your life doing things for which you expect to get a reward down the line but never at the moment. This obligation we have as teachers, to make life count moment by moment to the students, is something we have to take seriously. The first thing is to make sure that the kids know why they're doing something and why it is important to learn this particular thing.

Again, the notion of feedback. There are many different types of feedback. One feedback is for the teacher to say, "You did well" and pat the child on the back or whatever. But the more important job, I think, with teachers, is to be able to teach the kid to get feedback for himself or herself, so that they are no longer dependent on your response. They are no longer dependent on a grade, but they can tell whether they are doing it right or wrong. In fact, an expert is someone who can give feedback to himself or herself in a job. We want the child to be an expert. Even at the lowest level of learning, you should be able to give the tools to the child so they can monitor their own performance. That's easy when you are working with something concrete and material: The child knows, when they're building a tower of blocks, whether or not the tower is standing up. Once the tower falls over, they get the feedback, "I did something wrong." When you are working with clay or you are working with paints, with music, etc., you can tell the feedback because you get it from the materials. It's much more difficult to learn to get feedback when you're working with things that are less concrete, like literature, like writing a good line of prose or a good line of poetry. There you have to develop the skill to know, "This is good; this is bad," and give the feedback to yourself.

By the way, regarding these two conditions of goals and feedback, somebody brought up during the intermission the question, "Well, yes, you can get clear goals, clear feedback when you are following a piece of music or when you are playing a game where the rules are clear, but how do you get clear goals and clear feedback when you are working in a creative activity, when you are a painter, when you are a poet, when you are composing a piece of music?" That's a very good question because, in fact, when you're working at a creative activity, there are no clear goals; nobody can tell you what's the next step that you should take. Nobody can tell you whether what you're doing is good or bad until maybe after

you are dead. That's not very useful. How do you get to enjoy what you are doing if you are involved in a kind of creative, open-ended work? The answer is something I learned from our studies where we followed up artists after a long period of time—20 years after they left school. What you find is that the artist who has not learned how to set goals moment by moment and the artist who has not learned to say whether this stroke of the brush produces a good color—if they can't tell that, they will drop out of art very soon, unless they become very successful immediately, which is almost impossible. If you don't get the extrinsic reward of success and you don't get the intrinsic reward of knowing you are doing a good job, then you give up. Why do something for which you don't get any results? If you are an artist and you are painting, what kind of feedback can you expect? Well, you can get the feedback of a gallery owner or a collector who will buy your work or you get written up in the paper, but that's so far away that you can't count on it. You have to get feedback immediately. That is the feedback of enjoying what you're doing, of saying, "Yeah, this color really goes well next to the other." If you can get that—and maybe nobody else thinks so, nobody else thinks those two colors go well, but if you do, if you really have an internal standard of what's good and bad in your painting—then you will be able to persevere even without external recognition, external reward. But you have to have that or you give up. Same thing with a poet. If a poet or a writer cannot tell after writing a line or a page or a paragraph, cannot say, "This is really good," and can't believe it and doesn't feel it in his guts or in her deepest conviction that, yes, this is good, or it could be improved—you can also say, "This is bad," of course; in fact, most of the time you say "This is bad," but then you can change it; you can improve it. But if you cannot tell whether it's good or bad, then you are left in limbo, with no information and no kind of rule or goal for how to go beyond that.

So in creative activities, the goals and the feedback are not clear and you have to learn to produce it yourself, but even when you're teaching a child, the ultimate service you can give a child, the ultimate gift you can give a child is to teach the child how to develop their own goals and respond to their own feedback, give feedback to themselves. That's when they become autonomous; that's when they become free of the system which administers rewards, often very erratically. But if you have the internalized system, if you have learned what you think is good or bad, then you are free; you are no longer dependent on the outside.

And, of course, matching challenges and skills—that is one of the most difficult things to do in a regular school where a teacher is sitting in front of 30 students with very different levels of skills. How do you give them the appropriate challenge? How do you give each child the appropriate challenge? One thing that I was impressed by, visiting the Montessori school I visited north of Chicago, was that, in fact, the teacher doesn't try to do that, at least in the school I saw. It's the environment, the different materials, the different relationships between children which will enable the particular child to find the right level of challenge, given what's available around. So the teacher doesn't have to beam an average message to the class, which is what happens in normal schools, where the teacher has to talk to the average, and therefore some of the kids will feel over-challenged and will

feel anxious; others will feel that the stuff the teacher tells them they already know and therefore they are bored. So trying to fit an average message to a classroom of 30 kids almost for sure will miss an awful lot of kids. If you don't try to do that—as was the case in that Montessori school, where the kids could seek out their own level of challenge because there was enough in the environment, in the classroom, to engage a wide range of children, and the teacher's job was simply to connect the kid with the right level of opportunity for learning in the environment—you are much ahead of the standard classroom situation in that sense, if you are doing that.

In my schooling, 1 had the most intense learning experience in fifth grade, when I happened to be in a village in Hungary where we were cut off because the war was coming and we happened to be in a village and we had to stay there for almost a year. This village had a one-room class where kids from kindergarten to eighth grade were in the same classroom with one teacher. I learned more there than in the elite schools that I went to before and after, because this teacher took this job as being kind of an orchestra conductor. He never lectured. He never stood up in front of the class. He just matched the kids in little groups every day, depending on skill levels. If there was one student who was good at math, she would work with those who were a little below her and if one student was good at writing or reading, he would take another group and work. All the teacher did was match up and form groups and walk from one group to the other and see what was happening and nudge a little here and nudge a little there. But we were always busy; we were always involved. Practically all students had a chance to become teachers beyond the fourth grade. Every older student had groups of younger students. That seemed to work very, very well. Of course, it takes more skill to do that than to stand up and lecture. Anybody can do that; it doesn't take much skill. But to run well this type of learning where you are trying to find the best way to match skills of students, that's much more difficult. So there are different ways of doing it, and I think you probably do it quite well, from what I can see, and that's not a problem in your type of schooling.

The other thing to make flow possible in schools is, of course, to try to minimize distractions. Here are three that seem to be major types of distraction in schools from our research. The first is what we call threats to the ego. Threats to the ego involve mostly making the student feel vulnerable and stupid and inferior. Again, good teachers don't do that, but it's amazing how often it happens anyway in regular schools. Using pagers, for instance, we end up in situations where we page a student, let's say, at nine in the morning in the first class, and in that class the teacher makes the student feel conspicuous by saying, "You really goofed up this time; this was a stupid answer" or something. Then we follow that student for ten times that day with the pager and that student never thinks about the subject matter for the rest of the day. He or she is still thinking about being made conspicuous in front of her friends in that class. All the student writes down are nasty cracks about the teacher and is still ruminating about that event, is not taking in the algebra or biology or English—that goes by; all they can think of is how they can get back in the good opinion or respect of their classmates because, for most of adolescence and late childhood, the most important thing is to be accepted and

respected by your classmates. Making a person feel stupid or vulnerable in front of the class is a sure way to cut off learning and flow for the rest of the time.

The other way, of course, to invoke self-consciousness is by praising a student too much in front of the class, because that also brings the self-consciousness to the fore. You are now worried that your classmates will think that you are a teacher's pet or you are trying to ingratiate yourself, so giving too much praise is almost as bad as putting down a student in front of the class. That's one typical thing.

The other one is interrupting, changing goals arbitrarily, and that's again something that happens less, I think, in Montessori schools, from what I've seen, than in other schools, where there is too much emphasis on the clock; there is constant interruption from the loudspeaker and whatever. Children are not allowed to follow the organic development of their interest in a way that is necessary for somebody to really experience flow; they're kind of pulled every period into a new set of goals, a new concern, and that is not very healthy for this kind of experience. That's one reason why most kids really get the deepest flow experience from extracurricular activities, when they are doing drama or orchestra or working on the student paper or doing athletics, where there is a more realistic kind of rhythm of involvement instead of this jerky exposure to information.

Another thing that would help is focusing on the process rather than results. One of the obstacles is when a child gets the message that the only reason to play music, to learn music is so that they can end up in Carnegie Hall 20 years later or something, or that the only reason to learn to read and write is so they can get a job. When you focus too much on results, you communicate to the child, "This is not fun. The only reason to play music is so you can get a good job or fame later on." And so you can spend 15 years playing music and not get any enjoyment, and what's the point of playing music if you don't enjoy it? That's the whole reason that people invented music: because it transports you to a different plane of experience while you are listening or playing. If you can't get that, hoping that 20 years from now you'll be at Carnegie Hall is not going to do you any good.

One of my friends, who went through some of this really traumatically, is a pianist named Lauren Hollander, who was a child prodigy and was playing with the Philadelphia Orchestra when he was 5 years old. He was an incredible pianist. But his father was a member of Toscanini's NBC Orchestra; he was the first violin there. He would come home and criticize his son no matter what he was doing, what he was playing. And Lauren loved to play the piano, but whenever he heard the gravel scrunch when his father's car was coming home in the evening, he would tense up, close the piano, and try to hide because he hated to be constantly told that "You are not doing this well; you have to do better." When he was 13 years old, he was playing again on the stage with the Philadelphia Orchestra, and he was playing a Rachmaninoff concerto and was doing very well, but during intermission he went back and his father said, "Well, you made a miserable passage in the slow part of that movement." He went back to play the second part of the concert and his hands froze, and it took him 8 years to get his fingers moving again. He is now playing again and recording, but he spends most of his

time running summer camps for kids who had the same experience. There are lots of them out there. It's not just the guy in the movie *Shine,* but there are thousands of kids who have musical talent who have been so scared and driven by their parents or by their teachers that they have come to hate music. And if you hate music, why would you do it?

A lot of what we do to children is not as extreme, but it's in the same category of focusing on what you can do with what you learn or what you will be able to do 20 years from now. That is the opposite, in a sense, of these immediate goals that you have to teach, the first point on that list. You are always postponing the results, the goal. On the other hand, to turn this around, we find these people who should enjoy music and don't because we are scaring them; on the other hand, you can take something that is not very enjoyable in itself, like math, learning math, which most kids and most grown-ups think is horrible, and you can make that into something fun.

I'm not saying you can forget the external goals and rewards, because the kids will grow up and they will have to use their knowledge in a real-life situation and so that's important. But, unfortunately, very often, instead of keeping the tension going between the enjoyment of the moment and the long-range result, we sacrifice the moment for the sake of what will come in some distant future.

Another point, of course, is allowing control and freedom. Again, in the Montessori system, it's much easier, from what I know and what I've seen, to make that happen, because the child does have choice to a certain extent. Of course, the overall choice of going to school or not is not there. We haven't yet found a way of letting the child actually choose to go to school every day. That is still forced. And that's very difficult to get away from. Schools would have to improve tremendously before we could allow children that choice. But once the child is in the environment, the amount of choice is much greater in a Montessori than in a regular classroom, where we are afraid of giving kids control. Of course, in the Montessori system, the reason you can give more freedom and more choice is because the system has created an environment where the child, in a sense, cannot go wrong. That is, there is enough interesting, useful, growth- producing material to catch the child's attention so that we can allow that freedom and choice because we figure that the outcome is going to be productive whatever the child does in that setting.

If we think more about it we say, "OK, how can we do even more of that?" In other words, how can we give more control and freedom, given what we know now about the system? The way to give more control and freedom would be to give even more interesting options and more productive materials so that the child can take more and more initiative and you can step further and further into the background. The whole ideal teaching situation is obviously one in which the child takes the initiative and the teacher becomes simply a kind of a traffic cop—that's not a good analogy—more like the conductor in the orchestra—that's a better way of saying it. The point is that if the child becomes intrigued, if the child becomes self-motivated, autonomous, then you have done the greatest service you can do;

you have really achieved what teaching can be about, which is to set the child on a course of lifelong learning.

The kind of schools we have now are predicated on the idea that when children finish school, they will burn their books, forget everything they learned, watch as much TV as possible, and not do any more learning because they have been so burned by the whole experience that the last thing they want to do is to keep learning. That's, unfortunately, the way schools operate. You see that, very often, the more rigorous the school, the more academically proficient, the more that's true. For instance, in Japan, the high schools and the grade schools are so efficient and effective, but there you see that most kids who go through that educational system, once they can shed the academic thing, they do it with a vengeance. Obviously, there are lifelong learners in Japan, too, and I know some very amazing people who keep learning, but the typical effect of that school system is not promoting lifelong learning, nor does our school system here, the regular school system.

What you want to do is to give the child the freedom and the motivation to go on learning for the rest of life. The beautiful thing to see about these people I will talk about tomorrow, these people who end up leading creative lives, is that they are 85, 90 years old and they are still learning and enjoy learning at that age. If you can do that, you are really going to be in a very successful situation.

I think these were the main issues that I wanted to talk about. The question is, "How can you make those conditions more typical of the situation in which you are at that time?'' As I said, the answers I've given are not terribly complete, but I think they give you the general principles of clarifying goals, providing feedback, matching challenges and skills, avoiding the kind of distractions that interfere with concentration and involvement, and, finally, finding ways to expand the control and freedom that you may already have in the classroom but which we can go a long way to expand so as to achieve that kind of lifelong learning that is the goal of good teaching.

Questions and Answers

Q: *What do you do with a disruptive child who then falls out of the flow channel altogether? Maybe you could give a theoretical response, since we are building a theoretical structure.*

A: The problem is that that child is disrupting other kids' opportunity to experience flow, too. What you would expect in such a case is that this child is not seeing the opportunities as opportunities. In other words, the challenge we give kids is an objective challenge, but whether that will be registered as a challenge to the kid depends on that kid's accepting this as a challenge. What counts is not the objective challenge, but the subjective challenge that the child perceives. There may be a very great difference between the child's perception and what's there.

If a child, for instance, feels overwhelmed by the challenges present, if he's anxious, he or she is not going to necessarily develop the skills to be able to go into flow, but the other response which is open to the child is to deny the challenges. So you kind of fall down into the very bottom of that flow channel. In other words, you say, "This is not interesting. This is not for me. There is nothing for me to do." That response, which would suggest that you haven't given the child enough challenge, may in fact mean that there are too many challenges. The challenge may not come even from the school; the challenge might be at home. The kid is too worried about his parents, too worried about his home life, and at that point cannot deal with the challenges, so he denies that they exist and tries to climb down into a little, safe place where there is nothing to do. Maybe that is not necessarily a stable position for the child, either, because he may then try to show that he is better than the others, so he will try to put the other kids down or to disrupt things.

That's the problem, that the skill to disrupt, the skill to be violent, the skill to put kids down is the easiest skill to have. Every child has that. Every child knows how to kick another child. If there is no other skill that you can use, or you feel like you don't have that skill, then the way to show that you have skills or that you can control the situation is by resorting to the least common denominator, which is violence, disruption, etc. So in a situation like that, you have to be looking for things that are happening out of school, things that are bothering this kid, which are not obvious, and make them feel protected at first, safe first so that they can explore the opportunities slowly and get back on track. Sometimes you just can't do it. You are not miracle workers. But that would be the way I would feel.

Q: *If it is a professional goal of the individual guide to achieve flow learning him- or herself, which enables the child to observe flow learning in an adult, what steps should she or he take in order to do this?*

A: That seems to be a very important characteristic of teachers. From what we learned about which teachers students remember best and can say that they learned most from, there are two types of teachers—and often these are overlapping—there are two reasons why teachers are effective generally. One is that the child feels that the teacher took a special notice of him or her, that she felt validated by the teacher's interest and attention. The other is that the teacher enjoys what she or he is doing. Often the second reason is described in things like "The teacher is—well, she's crazy; she's a nut." And then you ask, "What does that mean?" and they say, "Well, she liked mathematics. Who would like mathematics except somebody who is a nut?" Usually you convey the enthusiasm about things that the students would not necessarily think it is worth being enthusiastic about. But when they see an adult who is really getting enthusiastic about something, that means something to the adult, that is a very important message, one that children all too often don't get. Most kids, teenagers have in their rooms icons of entertainers, singers, athletes—these are the people they look up to because they think these people have fun; they enjoy life. Engineers, teachers, doctors don't enjoy life. So why do you want to be one of those people? I think if you can somehow convey the excitement that comes from learning—and, of course, in a sense, I should say that you shouldn't be a teacher unless you do have fun doing it, unless you really

believe that this is worth doing, If you can convey that through whatever means, I think that's a very powerful pedagogical influence. Just enjoy. You don't even have to worry about how that information gets transmitted; if you can transmit the enjoyment, I think that's powerful enough. They will find the information. They will seek out the information on their own. I didn't give you any specific advice, but I confirmed that what you asked is important.

Q: *A lot of Montessori materials have controls of error built into them, so the children get immediate feedback from the materials. We were wondering about how we can give immediate feedback to our older children, who seem to want it more at times, with so many children in the classroom.*

A: Again, it's very hard to give a general recipe because, as you say, some kids seem to need it more. I think everybody at certain periods needs it more than others. I think it's a question of paying attention to the child and realizing that at certain points you may have to give feedback over and above what the material itself can give. I think both are important. You have to realize when it is that the child is insecure enough that you need that personal feedback, too. It's very difficult to give a general recipe. It depends on the kid.

Q: *With children who are experiencing stress or anxiety or interruptions or a prolonged state of apathy, i.e., television, in their home life, how can we get them back into flow in the classroom environment? Also, how do we optimize the parents' experience of flow, both as parents and in their life, and help them to recognize and respect it in their children?*

A: Good question. I wish I had the rest of the day to talk about that topic, because it is one of the things that is most baffling to me: how little flow people usually have at home, not only children—children manage—but how little parents have. More flow at work, usually, for adults, than at home, and yet everybody wants more free time to be at home and they rush home to have a good time and then they're bored because they have no idea of how to create—you should have Montessori materials for parents to keep at home. I think the only thing most people have, at home to work with is the TV. There used to be musical instruments, libraries—those are very rare. There is very little flow experience at home, and I think almost the best education is the one where you can involve the parents and make them aware of how important their contribution is, not only to the child's learning but to their own life. Somehow you have to get them in and get them to realize that education doesn't stop in the school and that it's very essential. I don't know how much you get the parents involved, but I think to the extent you can do that, you are much better off.

Q: *This question is about group flow. If the group were flowing, but there were an individual who interrupted that flow, how do you reconcile those two, or would you make a recommendation about that?*

A: That's really difficult because you find, for instance, there have been very good studies that show that if you get a student to present to the class, standing in front of the class, usually that person is in flow and everybody else is bored. So it becomes a kind of serial flow, but very inefficient. In group work, whenever there is group work in a class, there is not as high a flow for anyone as for the presenter,

but almost everybody else has a chance to be in flow. There is a lot known now about these micro-environments in the classroom and what's the best. I think if you can get people to work alone on their own interesting tasks without integrating with others, then you have separate flows, and that's OK, that works. If you have group projects, where everybody is really involved—[The questioner broke in: "Let's say a small group, of 4, 5, 6, as opposed to a whole class."] Yes, right. That's usually a very good environment. It's the best you can get in school, where everybody is involved. It's better than listening to the teacher; it's better than a single person presenting to the class; it's usually better than each person doing their own because many of the people don't know how to do it on their own. So, given that it's an imperfect world, that's one of the best milieus.

Q: *Can you have flow in a classroom with the students? Can the students have flow when the adult is not in flow?*

A: It's harder, but certainly you can, because if the materials are stimulating enough or the problem is interesting enough, the kid can get into flow even if the teacher is out of it. It's much better, though, if the teacher is involved. We've found that the attention of students is related to the flow of the teacher in almost every subject, but in math it stops being correlated after about third grade, because by fourth grade most students who are not good at math are so out of it that even if the teacher is in flow, they don't pay much attention. Otherwise, it does help.

Q: *We were wondering if you could comment about what's happening in between periods of flow, because in the classroom, sometimes, when they're in between those flow periods might be a time when there's more disruptive or distractive behavior.*

A: It's true that it's very difficult to be in flow all the time. Nobody that I know can be in flow all the time. Usually you need periods of recovering and relaxation and so forth in between. But it's not the case that too much flow creates disruption. I think it's usually too little flow that creates disruption. I wouldn't worry too much about what happens in between. If you generate the conditions of flow, kids may be horse playing for a little bit but it's not the kind of real disruption that comes when you're bored and when you're apathetic for a long time,

Q: *We have work cycles in the morning when a child may choose two or three different activities in succession, hopefully in flow with each one. When they've finished an activity, they usually have a kind of a rest time, and some times they need an adult to kind of help them choose the next thing. What can an adult do to facilitate the next engagement, the next episode of flow?*

A: Again, I hesitate to give general recipes because kids are so different. Some kids, if you try to nudge them into a particular activity, just to show their independence they will do the opposite. Others are more dependent and so if you give them something to do they will be grateful for it. Nothing can shortcut the attention you have to give to kids to figure out what works with them and how they can get motivated. As I said, the moment you get a general recipe, you immediately set up a mechanical system which will produce a reaction on the part of the children because they don't want to be forced or manipulated or pushed. What works is their feeling that you generally understand what they want or what they

need and that you are willing to help them to get it. If they get that impression that you are on their side and you are understanding them, then they will respond. But in order to feel that, you actually have to pay attention to them. You actually have to understand them. If you do, you work one thing one day, something else the other day. But if you have that empathy, that understanding which requires attention, then it will work.

Q: *We had not so much a question as observations to share. Members of our group were struck by the usefulness of this chart* [Fig. 6.1] *from a couple of different angles, one being parent education—that it's new language and a new way to talk about their child, their child's interests and emotional level and development in the classroom, and that it also comes from a field outside of Montessori and is well documented. And as well, it can be a tool to determine the effectiveness or appropriateness of a presentation given. If you step back to observe the response of the child—where on this chart is that child? Have you hit that arousal state? Or is there control? Could the challenge be a little greater? Or are they totally bored and apathetic?*

A: Just to respond to that observation, it's true that in a sense what I've been trying to do for the last 30 years is to develop a way to make legitimate the study of inner experience because that is such a subjective thing that up to now it was very easy to forget it, to say, "OK, well, we know that things happen to people; they have feelings; they have moods; but since we can't deal with it concretely, systematically, let's ignore it; let's do the things we can measure. IQ we can measure; we have a test; we can put people through a test. We can measure all kinds of different things, but feelings, inner states, subjective states—that's not real because it's not measurable." I think the more we can talk up front, concretely about these issues, the more we can actually have the real education, which involves the whole person, not just the intellect but also the feelings and the motives.

Author Biography

Mihaly Csikszentmihalyi is professor of human development and education in the Department of Psychology of the University of Chicago. He is a member of the National Academy of Education and the National Academy of Leisure Sciences. In addition, he has served on the U.S. Child Labor Advisory Committee, the Center for Giftedness of the U.S. Department of Education, the Board of Advisors for Encyclopedia Britannica, and the Advisory Board for the J. P. Getty Museum. Professor Csikszentmihalyi is the author of over 150 scholarly articles as well as 10 books, including *Flow: The Psychology of Optimal Experience, The Evolving Self* (excerpted in The NAMTA Journal, Winter, 1997), and *Being Adolescent* (excerpted in the current Journal issue). *Flow* (Harper and Row 1990) was selected by four book clubs and has been translated into Danish, German, Swedish, Chinese, Portuguese, Japanese, Czech, Polish, and Italian. Professor Csikszentmihalyi presented this talk and the two that follow it at the NAMTA conference entitled *Deepening the Montessori Experience: A Time for Reflection and Creativity*, April 3–6, 1997, in Stevenson, WA.