

Managing the Classroom Information Field for Optimum Learning

By G.M. Prince and Marilyn Susan Yas

We are examining one of several kindergartens in Needham. We are focusing on it because the children who attend this particular kindergarten are behaving so differently from their peers. It is a day in March and school is about to begin. The children are, by rule, lined up at the door of their rooms ready to "pass in quickly, quietly and cooperatively". There is the usual squealing, shoving, laughing and horseplay except in the case of this one class. Here the twenty students stand, quietly talking and waiting for the door to open. This group, that we will call K 1, stands out because they do not seem to be infected by giggles and horseplay.

As we follow them into their room, there is a cheerful, relaxed undertone of conversation and most say, "Hello, Miss Yas", as they quietly go to their lockers, hang up their raincoats and deliver notes from home into a large box labeled "N", (the box with label is an invention of the children) and go to a seat of his or her choosing. One little girl has a story to tell Miss Yas and as these two converse, the rest of the class moves into small groups and several quiet conversations begin. These continue for a few minutes until Miss Yas and Vera have finished their meeting.

Miss Yas then says, Good Morning to all and suggests that they plan their day. She has written on the board a list of all the things they want to accomplish in that session. "What shall we do before our snack, and what after?" She asks.

There follows a discussion in which the children decide. If one has trouble reading an item on the list, another helps. They negotiate most differences, but if they hit an impasse, they settle it by vote. Then they implement their plan. This daily exercise develops a sense of time and planning ability, and more important, an awareness of being in charge of themselves.

K 1 is an unusual class. 18 of the 20 children have taught themselves to read. In the traditional kindergartens about 2 of 20 learn to read. At "sharing time" when the children take turns telling of experiences, it is not unusual for two or three to collaborate and present a dance, complete with music or other creative presentation—a high risk adventure for a five year old. Some write "books" which they read to the class.

K 1 is visited once a week by a music teacher, a phys-ed teacher, and a librarian, who give special training. Each of them has taken Miss Yas aside and remarked on three ways their experience with K 1 is different from other kindergartens: they are impressed with the unusually long attention span of the children, their high level of enthusiasm and responsiveness, and finally their own level of enjoyment in working with these children. There is no need to spend any energy on control or discipline or settling arguments.

An observer would note a marked difference in the way K 1 children behave while walking in the hall and waiting to board their busses at the end of the day. While there is the usual hubbub, pushing, giggling and competition for first place in the line, the K 1's are calm and in quiet conversations with each other. Early in the year they problem-solved about taking turns being first so that is not an issue, and because they are used to being in charge of their own behavior there is no need to act out.

Miss Yas has followed a new system in relating to her charges. It is called Field-Based Teaching. She has developed the necessary skills to create an interpersonal field in her classroom that respects the fundamental need of a child to develop autonomy and responsibility for him or her self. and respect for the needs of others. It is an emotional field that brings out the best in her students. It is based on extensive research into basic needs, brain function, the thinking/learning process and how people are physically and emotionally affected by the information field which surrounds them.

Dr. Murray Bowen in his research into family systems identified two instinctually rooted drives: one toward independence, individuality and autonomy; the other toward togetherness and belonging. When these needs are ignored there is reactivity and defensiveness that interferes with thinking and learning and relating. Here is how this works:

The Thinking/Learning/Creative Process*

Step 1.	Perceiving—becoming aware of/observing
Step 2.	More or less confusion
Step 3.	Trial connecting the unfamiliar with things I know to make sense of it
Step 4.	Deciding on a connection to form an idea of the observation
Step 5.	Testing to see if the new idea matches reality and makes sense
Step 6.	Repeat steps 2 through 5 until it seems right

*This was developed through research with thousands of managers in business as they worked on problems and inventions. Syntectics® Inc., the company that did this research, is one of the original and still the largest teachers of creativity to industry.

Examples

Connecting to create meaning/understanding

Grandson, six-year-old Max, is with me on a boat. He is pumping water, invisible beneath the floor-boards, out of the bilge. It is his first time. The pump sucks air. I say, "What does that mean?"

Max says, "It means I have pumped out all the water."

"How do you know that?" I ask.

"From sucking a soda with a straw."

The essential action in each of these steps is to make connections. Going through these steps presents many opportunities to make "mistakes" or feel mistaken and uncertain. If, in my past experience I have been rigorously corrected and disapproved of when I made mistakes, all of these thinking steps can trigger anxiety. If my internal field or the field around me is unfriendly or punishing, my foresight function will urge me to avoid the risk of proceeding—in other words, to stop thinking.

Connecting to create a new idea

Sally needed a better place to study for exams. Her roommates distracted her and she did not want to go to the library. She needed a new way to think about it so she went on an "excursion". The image of a mushroom popped up in her mind. She pretended she was inside a mushroom. It was cool and damp as though in a cave. The walls were nubby and moist. There was a faint pulse as though the mushroom was breathing—it was a little like a heartbeat...

Sally thought, "Heartbeat...it would be comforting, as though I am in a womb. It would block out other distracting noise. That is what I will do. I will record my heartbeat and then play it back into earphones. Wherever I am will be a place to study."

Anxiety

In the mid fifties, Harry Stack Sullivan, the great psychiatrist made us aware of the enormous influence of anxiety on our thinking operations and behavior. He emphasized that the underlying apprehension that gives anxiety its overpowering force is fear of abandonment.

More recently, Goleman, LeDoux and van der Kolk in their studies of the brain and trauma identified the physiology of anxiety and underscored the physical component that makes anxiety such a potent influence in thinking.

Dr. John Gottman conducted research with couples over a twenty year period into the emotional impact of negative transmissions (words, tones and non-verbals) on couples discussing their everyday issues . He found that when there is more than **one** negative message to every **five** positive, validating messages, the marriage will be unstable. The four major offenders, he found, are: criticism, contempt, defensiveness, and stonewalling.

In the study of thousands of videotapes of invention sessions, Synectics found that *any* discounting action led to a destructive revenge action from the discountee and had a negative effect on the field for accomplishment.

Relating these findings to children, it is revealing to read Brazelton and Daniel Stern on their studies of the extreme sensitivity of children to the transmissions of their parents, teachers and other authority figures. This is not news to teachers who have observed how young children, when attempting something independently, continually check the reactions of the teacher.

Study of sufferers with Post Traumatic Stress Disorder (PTSD) has revealed a close relationship between feelings of helplessness and the impact of a traumatic event. People who have a well-developed sense of competence and self sufficiency tend to survive high stress without after-effect. This underscores the importance of encouraging children to take initiative and develop self-reliance. When there is too much control and "telling" rather than "figuring out", a child will learn helplessness , over-dependence and "hidden" ways expressing his autonomy.

The implications of Gottman's five to one law suggest that present teaching practices (not to mention childrearing practices) may involve far too many discounts and negatives and too few validations and appreciations which may be causing children to be defensive, rebellious and self-limiting.

Field Theory

In 1954 Sullivan stated that the most powerful determinant of an infant and child's well-being is the *interpersonal field* that is created between the child and her parents.

The more recent field theory from quantum physics gives us an explanatory, unifying and fundamental concept that may be used as a guide in designing creative and learning environments.

The physicists found that sub-atomic particles exist as a tiny, invisible fields of energy—bundles of potential. Only when two such fields come together, do their potentials come into being.

We now believe the field around us is made up of information which is generated by everything in the field. As this external field of information envelops a child it interacts with his internal field and determines his behavior, which, in turn, influences the general field.

Margaret Wheatley suggests that each of us is a bundle of potential and the field determines which of our talents will develop. The diagram on the next page is an attempt to combine the findings and apply it to children in school.

From knowledge of the learning process we know that the essential activity is connection-making. This process can happen through a teacher explaining something. The child will learn this way. The teacher is in charge of the process and focuses on having the child get and remember the correct answer. Another, more effective teaching approach is known as discovery learning. In this process, the child is led to make the connections herself, obviously a more involving and satisfying way of learning. The emphasis is on making the *correct* connections and getting the right answer.

In Field-Based teaching the discovery idea is carried further. The emphasis is still on making the correct connections and getting a right answer, and the emphasis is also on the *process*—the sometimes messy trial and error process necessary. The objective is to help the child experience her own trial and erroring without evoking the anxiety of *having to be instantly correct*. That fear of being “wrong” as one works toward a right answer triggers anxiety and leads to *avoidance of the thinking process itself*. (see next pages)

Perhaps the best way to illustrate Field-Based teaching is to describe a typical interaction in K 1.

The children have been encouraged to identify problems and do problem-solving from the first day. They feel free to bring up whatever they think might be useful to them or the group.

Bobby: When the parents come in and sit in the back it makes it hard to work.

(there is general agreement that it interferes with their work)

Ms. Yas: Well, if we would rather parents did not come in at the end of the day, what can we do about it?

Timmy: We can lock the door

.Ms. Yas: Yes, good, that would work (and writes it on the board)

Sally: We could each ask our mothers not to come in

Ms. Yas: Yes, that's a good idea and it would work too (and writes it)

Eddie: It might be hard to remember to tell each mother.

(there follows a brief discussion of this)

Dan: We could make a sign that says "Do not Enter" and hang it on the door.

Ms. Yas: That is another good idea (and as she writes it up there is general agreement that that is the thing to do)

Ms. Yas: If that is what we want to do, let's make the sign.

(Dan gets some drawing paper and a crayon) How do you spell "Do"?

Ms. Yas: What do you think? Can you sound it out?

Dan: duh, that sounds like a D.

Ms. Yas: Do you want to try that?

Dan: (writes a "D" and then says) uue. That's a u

Ms. Yas: Yes, that sounds right. Do you want to try it?

(Dan, after consulting the alphabet on the wall, writes "U")

Sam: There is a "do" in my reader and it is spelled DO, so that should be an "O".

Ms. Yas: Are there any other letters that sound right?

(the class finds several and Ms. Yas writes them all on the board.) The English language is kind of crazy the way they don't always use the letters you would expect, for instance DEW sounds just like DU or DO. How are we going to decide which is right for the sign?

The class decides to use the spelling from the book and goes on to work out the spelling of "not disturb". The sign is placed on the door and solves the problem.

Every problem that arises is worked on in the same way, with the children in charge of developing the solution and at the same time learning the honorable process of connecting through trial and error, allaying the anxiety of mistake-making, initiative, and coming to appreciate the value of respectful collaboration.

Field Management in the Second Grade

Ms. Yas used the same child respectful process in teaching second grade in 1993-4 (?) and it paid the same sort of dividends in bringing out the best in the seven year olds. From the first day she was clear about her objective: to nurture in her twenty-four students a self-organizing system—a system that would enable the children to take charge of all of the learning and relating opportunities of the year. She, as teacher, would focus on the children, listening and looking for rewarding directions *originating with them, and she would make every effort not to control them.* They were to be in charge of themselves.

Her constant goal is to model and create opportunities for the children to experience *connection making* in every possible way: to learn, to initiate, to create, to relate to each other, self and to her in a *respectful* way. Her dream is to have every child be and feel meaningful throughout the school day.

It might be useful to hear of a few of Ms. Yas' procedures to implement Positive Field Management and the resultant self-organizing system. The first class of the year, Ms. Yas gathered her children in a circle at the front of the room before a large easel pad.

After introductions she said, "You know, learning things can be a risky business. Can anyone guess why it can feel risky to learn something new?"

The children quickly identified that the risk lay in making mistakes, being wrong and not knowing the answer.

"Yes, that is why learning can be risky and during this year I want us to learn to take a lot of risks. Now, what do you want to risk learning this year?"

There was no hesitation. The children covered everything that would be taught and a good deal more while Ms. Yas wrote each item on the easel pad.

Right from the start, she wanted to bring into their awareness that they would have a say in what would happen in class, that learning involves trial and error and can make a person anxious

Next, she said, "We want to have a lot of fun this year and sometimes when we are having fun we get noisy and that is OK, but we need to be thoughtful of the classes next door to us, so we need to invent a way to keep us from getting too noisy. Any ideas on how we might do this?"

The children's solution had two parts. Whenever one noticed that they were getting too noisy, he or she would hold up her hand with two fingers giving the victory sign. As others noticed it, they would hold up their hands too. If they were too absorbed to notice, then the "noticer" would go to the light switch and turn the lights off and on. They used this system effectively throughout the year.

Next came seat "assignments". The small desks and chairs were arranged in the traditional neat rows. "We will be working together a lot so I want each of you to choose a desk and chair and move it together with two or three other people you would like to work with.

This was another step in building a field of self-determination. Throughout the year these small groups learned relationship skills. It was Ms. Yas' practice to write up on the board all the tasks of the day. Each group decided in what order they would do them. They not only studied independently, but also wrote and read aloud stories to the whole class. They did problem-solving as groups and sometimes as a whole class (How stop bullying on the playground?). The small groups of desks became known as "Think Tanks" after the name given to the creative problem solving system they learned.

Children could move their desks to join another group, or do some work with one or two other companions whenever they wished. They were in charge of who they worked with. [What did you do about a kid being left out?]

When their self-assigned curriculum tasks were completed, the children had "free time" to work on a project they had selected for themselves and upon which they would give a presentation when completed. Sam chose to build an apartment complex for Smurfs, Janice did research to learn all she could about AIDS, [need more specifics here]

[How did you manage recitations to the whole class?]

Every step of the way Ms. Yas was governed by the idea of putting each child in charge of her or himself. She made it clear by modeling that each child had two responsibilities: 1. to pay attention to his own thoughts, feelings and needs, and 2. to respect the thoughts, feelings and needs of his classmates. As a result of emerging skills of problem-solving and negotiation, the class did indeed become a self-organizing system. Learning activity was continual whether Ms. Yas was "watching" or not.

This allowed a different quality of relationship between Ms. Yas and her students. She was able to spend most of her time in intimate interactions with one or two or three children at a time. She could model respectful listening, responding and coaching.

After a few weeks the children put a sign on the door of their classroom:

RISK ROOM

Organizing/Learning Procedures

Ms. Yas led the children in learning a number of creative strategies developed by Synectics research. One, named Think Tank, is a problem-solving procedure that includes a way of stimulating new connections (Excursion) and a constructive way to evaluate ideas and situations (Itemized Response). The children learned to use these in groups and by themselves. At the end of each day they were invited to evaluate what had happened, Itemizing those happenings they liked, and those they wished had been different. If the differences were serious, they problem-solved to invent ways of changing the bothering situation

There were a number of observable outcomes such as markedly greater creativity in their writing, better self-management, and excellent collaborating. One of the most remarkable consequences was in the effect on Special Needs children.

At the beginning of the year there were four Special Needs children in the class of twenty-four. Two had serious behavior problems; all were thought to need outside help. One, who we will call Jerry, needed outside help in: reading, organization, occupational therapy, physical therapy, learning disability, and behavior. These were continuations of his first grade program. (his first grade teacher believed he was mentally retarded). Ms. Yas and his parents decided to eliminate all outside help to avoid reinforcing Jerry's belief that something was wrong with him. At the end of a year of Positive Field Management, Jerry and the other three special needs children had

“found” themselves and no longer needed special treatment. These children are now in seventh grade and continue to do well.