It is important to consider the following trends when planning inservice and preservice programs: (a) multiple crisis potential (food, energy, environment, water, war and peace issues, etc.); (b) declining birth rate resulting in smaller numbers of humans in traditional school-age brackets; and (c) increasing demand for continuing education. Following are some ideas designed to meet these needs: (a) lengthening of practice teaching experience and broadening of inservice teachers' experience; (b) involvement of teachers in organized activities outside the standard curriculum and more school/community cooperation; (c) experience in future studies to provide skills in anticipatory decision-making; (d) experience in sensitivity training to develop increased awareness of needs and sensitivities of others; and (e) training in values clarification to aid individuals in building their own value systems. (This document also includes activities in future studies for elementary and secondary school students. (PB)
GUIDELINES FOR A MORE REALITY BASED TEACHER PREPARATION PROGRAM FOR THE FUTURE

Consider these thrusts or trends. 1.) Multiple crisis potential, (food, energy, environment, water, war and peace issues, etc.) 2.) Declining birth rate, smaller numbers of humans in 'traditional' school age brackets, 3.) The increasing demand for 'continuing education.'

The following concepts and programs address these needs. Both In-service and Pre-service Programs should given them serious consideration when planning their goals and processes by which they are achieved. Obviously, there can be certain experiences that include two or more of our recommended points.

We can think of no good reason why a profession that offers services directly supporting the growth of human beings requires less time to prepare its members than MacDonalds Hamburgers requires of its professional staff. The majority of states presently requires three to four courses and one semester's worth of practice teaching for certification. Most students wait until their last semester, work with one age group at one grade level and beyond elementary levels, have some amount of expertise in one subject area. After being locked into this track, they seek employment, only to encounter the Catch-22: "Try us next year, when you have some experience." Or, "There are and will be no jobs in this school for your specific area of competence."

We recommend a lengthening of the practice teaching experience. We also recommend a broadening of the in-service teacher's experience, with a variety of age groups and learning environments. The entire community will become a school, as more people of all ages seek further learning. Teachers will have to respond with their skills outside of the classroom and must have experience doing this. The pre-professional who gains the flexibility created
by such a program will be sought after by those school systems which are becoming more flexible themselves.

Teachers, as well as students, will be involved with what has been called the "paracurriculum", which calls for organized activities outside the standard curriculum: community services providing child care and care for the elderly, community research in areas of transportation, land use, ecological issues, are prime areas for school/community cooperation.

We can also see benefits in the area of school/community relations. As the economy continues to dismantle itself, school financing is going to become an even more sensitive issue than it is now. The economic squeeze will force communities to support those educational programs that serve the community in a number of ways beyond the traditional responsibilities.

There is also a need for pre-service and in-service teachers to acquire experience in the areas of future studies, sensitivity training and values clarification.

Future Studies provides skills in anticipatory decision-making, by helping the individual describe his/her role in the total picture. An important motivating force for any individual is the image he/she has of his/her future. Futures forecasting tools, properly adapted, make good personal decision aiding tools, due to their multi-variate and anticipatory qualities. Finally, seminars in energy, population, resources, environmental and war/peace issues (best summarized in Anne and Paul Ehrlich's book *Population Resources and Environment*) enables students to form some sort of overview of the world and problems facing humanity.

Sensitivity training calls in the face of all this. With the teacher of tomorrow assuming more and more roles, with more and more diverse groups of people, an increased awareness of the needs and sensitivities of others is essential. We can no longer afford to have people calling themselves
professionals who cannot or will not change and who cannot or will not place the individual student and his needs on a par with themselves and above the curriculum.

Lastly, we advocate values clarification training as another element in our guide for better teachers. Values come into play every time an individual has to make a decision. Hopefully, the values one calls upon are one's own. Since none of us lives in a vacuum, however, there is a reasonable chance that such is not the case. Traditionally, values have been developed, or trampled, by way of inculcation, authority, "role modelling" or some other device. A process which involves the individual building his own value system has been developed by Louis Raths and Sidney Simon. This system comprises seven steps which encompass the individual's prizing, choosing and acting upon his or her beliefs. It is best explained, both in theory and in practice by the authors themselves in Values and Teaching, by Raths, Merrill and Simon, published by Merrill and Values Clarification by Simon, Howe and Kirschenbaum, published by Hart. These works, based on the thought of John Dewey, comprise the best curriculum base for any values program.

We believe that the changes in teacher education we have proposed will enable teachers to be of far greater assistance in meeting the needs of all students, as well as help to create, both in private action and public policy, a society that is more conscious in its treatment of the environment and more penurious in its use of energy.

HISTORICAL FUTURISTS

A good exercise for the high school or more elementary level Futures Course involves looking at past predictions.
Locate a library which has a microfilm collection of old newspapers or periodicals. Many local libraries now include the New York Times on microfilm. Have the class members look up a 30-50 year old paper and find a prediction or a forecast made. Have your students copy it and bring it to class.

In class, report on the findings. On the board make a chart with the following information in columns.

<table>
<thead>
<tr>
<th>name of prediction (technical or)</th>
<th>relation of forecaster to event (evident bias)</th>
<th>optimistic or pessimistic</th>
<th>self-fulfilling or self-defeating</th>
</tr>
</thead>
</table>

Fill it in as reports are given. Discuss the chart upon completion. I have found that, in general, technicians involved in developing a device foresee with some accuracy the positive effects, and usually miss any direct negative side effects or indirect effects at all. Doctors and others issue warnings some 5-10 years later. Social forecasters seem to project a future which requires people like themselves. No one making really imaginative forecasts is respected.

Explore the implications of this in relation to current problems and current forecasting.
PACKAGING YOUR FUTURES WHEEL

(Example of the kind of ditto you might use with your students to summarize their work with the wheels.)

Your Futures Wheel is really a picture or graphic way of showing what other things might happen if your tend, in the center, continues. We will be using this information in many ways and therefore it will be necessary to explain it to others in simple or summarized form. In order to "package" or make smaller all the information from your charts, complete the following steps.

1. Complete the circle.
2. Recheck each sub-trend from the one before it. Do you think the information is fairly realistic? It helps to use arrows in continuing your circles out.
3. One the back of your chart summarize what you think are the main results of your wheels. What things do you see frequently recurring as you do your wheel? It often helps to use different colors as you do your wheel repeating like sub-trends with the same color. Instead of writing you may wish to draw a small chart to show the results.
4. Do this neatly. You will be handling your wheel and summary to other members of your group to study.

Comments:

I hesitate, as a teacher, to overload my students with examples of how a wheel has to be drawn or how a summary diagram should look. This robs a tremendous amount of potential creativity from your students. They can
If we have more cars, what else might happen?
be masters at showing you how to use colors, diagrams, etc. Let them have fun as long as you are getting the point across.

WORKING WITH TRENDS

Activities leading into environmental inquiry with young students.

Create thought provoking questions for your students to discuss, write about, but not necessarily come to any decision about at this stage.

1. How did you get to school today? Could you have come any other way? (Comments about air pollution, road use and construction and increased car use should come into play.)

2. How do members of our community, or our family, get rid of the leaves we rake in the fall or the snow in the winter? (Children in city environments might discuss run off problems, etc. with snow.)

3. Should I refuse to drink out of bottles or cans that are non returnable or that can't be recycled?

ETC. Consult Instructor Magazine, Jan.-Feb. issues, 1972, "Teaching Environmental Education With A Focus On Values."

TRENDS

1. Define a trend in your class. What do students think one is? Have them give examples. Provide a simple definition if it helps after some discussion.

   a. It effects people in some way.

   b. It is either increasing or decreasing over time.

   c. You expect it will be increasing or decreasing in the future.
Write your definition in large, bright letters on the board or on construction paper where it is clearly visible.

2. Have students select a trend from their community (see #4 below) and do a wheel. (See example in following pages.)

3. In magazines, cut out pictures of increasing and decreasing trends, ones that you think will effect or do effect your community. Make collages, caption your pictures if you wish; discuss them in class. Older students may wish to do this on a national or global scale although the differences will not be great.

4. Have your students take paper, pencils and clipboards. Go for a walk in the community. With the minimum of discussion have each child list in one column all the increasing trends and in another all the decreasing trends they see while on their walk, (i.e., more sports equipment in store windows, more parking meters, less trees on the side of the road.)

Find a good place to regroup; the classroom isn't a bad place because students can check through their lists, make sure their items fit the definition and omit any that don't. Discuss as a group any items students might be unsure of as well as the trends that were collected. These lists provide information that can be used for a number of activities such as the wheels.

Teacher's: As students complete their collages, wheels, lists, etc. have them hang them around the room for others to see. Children enjoy comparing. What to do after trends? See next issue.
ISOLATED WRITING OR DISCUSSION QUESTIONS FOR OLDER STUDENTS

Adapt such questions into your curriculum when possible.

1. What environmental problems do you think people faced in the past? What ones do we face in the present? What about in the next ten or twenty years? What potential solutions do you foresee? How do you think your lifestyle will fit into this?

2. If people like making money and more profit means more pollution, what issues must we deal with? What value changes might we have to make?

3. A company that pollutes is moving into your community. Role play different members of the community so that all facets are represented, the businessman, the unemployed, children, parents, the mayor, etc. Use your imagination in creating the scene. Perhaps the company wishes to locate next to a stream used for recreation, on land where children now play. If there are issues actually going on in your town that the children are familiar with, use them instead.

4. What things do you presently value most about your life? What things do you think you will value in the next twenty years? Which things do you think you might not be able to have in twenty years? Why? Do you think there is a way you could have them?

Teacher's: Examine your values also. How are you dealing with them in your teaching?

"ENVISIONING THE FUTURE"

When we use the two words, "The Future" we are inferring a less linear and deterministic notion of time and a more pluralistic sense of time. What
we mean to say is "Futures," emphasizing the wide range of events which are conceivable or possible. For example: Ask your students what the word "snow" means? Is there basic agreement on its meaning? Then ask them if they know what an Eskimo's definition is. Did they realize that Eskimos do not have just one meaning for "snow" but many different meanings and words describing its various functions and forms? (e.g. some snows are good for hunting and tracking, others for travelling, housing or recreation, etc.)

Just as the Eskimo needs this sophisticated idea of snow in order to survive, perhaps we need, in this rapidly changing world of ours, a more sophisticated idea of what the future is and can be.

You may wish to distinguish between these terms:

- **possibility** - anything imaginable
- **probability** - something which is more likely to occur
- **preferability** - a desired event or goal.

Since any productive excursion into the future depends upon the lively imaginations of children, encourage, reward, and cultivate creative thinking by your students. Make an effort not to restrict them with: 1. present-day realities, (which may change) (suggestion: cite examples of changes throughout history and ask whether or not they believe that 100 years from now will be very different from today. 20 yrs? 5 yrs? 1 yr? What will have changed?)

2. your personal biases, (suggestion: ask whether they are basically optimistic or pessimistic about the future.) and 3. actual dates.

(suggested exception: ask them how old they will be in the year 2000. It is so far away?) Remember, it is more important for the class, at least in the first stages of conjecture, to have space for unrestricted thinking and to even be able to be a little bit goofy. You may wish to begin an activity
in future studies with a creative thinking exercise such as this: Suppose that tomorrow morning when you wake up you discover a Martian sitting at the foot of your bed. After rubbing your eyes, the Martian tells you that you may ask him/her/it three things. What would they be?

Besides a lively imagination and an open-ended notion of future time, children need greater development in understanding the interrelatedness between the parts of any system, be it social, machine, or biological. We have found that the most effective teaching tool for getting this concept across is the "futures wheel" exercise. (described in this newsletter).

Related to this topic is another short activity that you might try. Using two different pencils (or any other two objects of the same family) ask your class to tell you 5-7 things about these two pencils. Write their responses down keeping track of those statements emphasizing a difference and those, on the other hand, emphasizing a similarity. The results will be weighted by your choice of objects and their degree of similarity or difference but our bet is, they will uncover more differences than similarities. One reason for this, could be that our culture and social institutions place greater value on analytic thinking than synthestic thinking. You might follow-up by asking: When you think of other people, ideas, places, times, etc. do you try to find their shared or unshared traits?