Some of the criticisms that have been leveled at the educational establishment by social analysts are discussed. It is suggested that one of the new realities is that education must be a lifelong process in order to avoid the catastrophe of human obsolescence. The assumptions and elements for a new model of education as a lifelong process are discussed. Based on the assumption that the purpose of education is the development of competencies for performing the various roles required in human life, the first element in a new educational model would be a taxonomy of these roles and their required competencies. From the second assumption—the primary purpose of schooling is to help children and youth learn learning skills—seven elements of learning skills are listed. Assumption 3 is based on a spiral of "learning projects," where the school is presented to learners as a "learning resource center" and teachers are presented as "learning project consultants." Also, included in this report is an outline of life problems of American adults noting such areas as vocation and career, home and family living, personal development, etc., as well as a bibliography of the author's publications. (JS)
Alfred North Whitehead presented the insight about two generations ago that the reversal of the relationship between two basic dynamics of civilization in this century has required the redefinition of the purpose of education. Throughout history, until the first quarter of the 20th century, the lifespan of an individual was greater than the timespan of major cultural change. Under this condition it was appropriate to define education as a process of transmittal of what is known--of transmitting the culture. It was also appropriate to define the role of the teacher as that of transmitter of information and to regard education as an agency for youth. 

But, Whitehead pointed out in a commencement address at Harvard in 1930, "We are living in the first period of human history for which this assumption is false ... today this time-span is considerably shorter than that of human life, and accordingly our training must prepare individuals to face a novelty of conditions." In other words, as the time-span of major cultural change has become shorter than the life-span of the individual, it becomes necessary to redefine education as a process of continuing inquiry. The role of the teacher must shift from that of transmitter of information to facilitator and resource to self-directed inquiry, and to regard education as a lifelong process. For knowledge gained at any point of time will become increasingly obsolete in the course of time.
Two generations after this insight was presented, the schools around the world largely remain tied to the subject-matter transmittal framework of the medieval trivium and quadrivium (with some elaboration and the addition of vocational subjects). Accordingly, the educational establishment has come under increasing criticism from such social analysts as Saul Alinsky, Philippe Aries, Jerome Brunner, Jerry Farber, Paulo Freire, Paul Goodman, John Holt, Torsten Husen, Ivan Illich, Rene Maheu, Margaret Mead, Jean Piaget, Neil Postman, Everett Reimer, Carl Rogers, Charles Silberman, Harold Taylor, and Alvin Toffler. The heart of much of the criticism is that the schools are out of touch with the reality of both human nature and the nature of a changing world. And one of the crucial new realities is that education must be lifelong to avoid the catastrophe of human obsolescence.

Clearly, therefore, new models of education as a lifelong process must be developed. I present the skeleton of such a model below in the hope that others will join me in strengthening it and putting flesh on it. The model consists of several assumptions and elements.

**Competency Development for Life Roles**

The first assumption is that the purpose of education is the development of competencies for performing the various roles required in human life. The first element in a new model would, therefore, be a taxonomy of these roles and their required competencies. Here is the beginning of such a taxonomy:
<table>
<thead>
<tr>
<th>Roles</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner</td>
<td>Reading, writing, computing, perceiving, conceptualizing, evaluating, imagining, inquiring</td>
</tr>
<tr>
<td>Being a self (with unique self-identity)</td>
<td>Self-analyzing, sensing, goal-building, objectivising, valuing-clarifying, expressing</td>
</tr>
<tr>
<td>Friend</td>
<td>Loving, empathizing, listening, collaborating, sharing, helping, giving feedback, supporting</td>
</tr>
<tr>
<td>Citizen</td>
<td>Caring, participating, leading, decision-making, acting, &quot;conscientizing,&quot; discussing, having perspective (historical and cultural)</td>
</tr>
<tr>
<td>Family member</td>
<td>Maintaining health, planning, managing, helping, sharing, buying, saving, loving, taking responsibility</td>
</tr>
<tr>
<td>Worker</td>
<td>Career planning, technical skills, using supervision, giving supervision, getting along with people, cooperating, planning, delegating, managing</td>
</tr>
<tr>
<td>Leisure-time user</td>
<td>Knowing resources, appreciating the arts and humanities, performing, playing, relaxing, reflecting, planning, risking</td>
</tr>
</tbody>
</table>

Obviously this list is not exhaustive; it is intended merely to illustrate some kinds of potential candidates for a taxonomic system.

**Development of Skills of Learning**

The second assumption is that the primary purpose of schooling is to help children and youth learn the skills of learning. The ultimate behavioral objective of schooling would be: "The individual engages efficiently in collaborative self-directed
inquiry in self-actualizing directions." I believe that these skills of learning include at least the following:

1. The ability to develop and be in touch with curiosities. Perhaps another way of describing this skill would be "the ability to engage in divergent thinking."

2. The ability to formulate questions, based on one's curiosities, that are answerable through inquiry (in contrast to questions that are answerable by authority or faith). This skill is the beginning of the ability to engage in convergent thinking or inductive-deductive reasoning.

3. The ability to identify the data required to answer the various kinds of questions.

4. The ability to locate the most relevant and reliable sources of the required data (including experts, teachers, colleagues, one's own experience, the various audio-visual media, and the community).

5. The ability to select and use the most efficient means for collecting the required data from the appropriate sources.

6. The ability to organize, analyze, and evaluate the data so as to get valid answers to questions.

7. The ability to generalize, apply, and communicate the answers to the questions raised.

The Development of a Spiral of "Learning Projects"

The third assumption is that the curriculum of organized education will most effectively achieve the objective of schooling if it is organized according to a spiraling series of in-
dividual learning projects, with the understanding that several individuals with similar learning needs might engage in a learning project collaboratively. Under this assumption I visualize that the school would be presented to learners as a "learning resource center" and that teachers would be presented as "learning project consultants."

In brief, the curricular process would work something like this:

Each individual's learning project spiral would proceed according to his maturational process. At each developmental stage (to be determined by diagnostic procedures) the learning project consultant would expose the learner to appropriate role competency models. For example, for early learners these might include the beginning competencies of the roles of learner, friend, family member, and leisure-time user. These roles might well be the focus for the next several years, with increasingly complex competencies being presented. In early adolescence the emphasis would gradually shift to the roles of unique self, citizen, and worker.

Following each exposure to a role competency model the learner would select a set of competencies for which learning projects would then be developed with the help of learning project consultants and other relevant resource specialists. Emphasis would be placed on the learner's making use of learning resources increasingly proactively and in widening circles out into the community.
At the completion of each learning project the consultant would engage with the learner in an analysis of the experience in a variety of dimensions, including cognitive gains, learning skill gains, affective gains (and losses), and diagnosis of further needs.

I visualize that the learner would be gradually weaned away from the perception that he is engaged in schooling, and that when he has acquired the skills of learning appropriate to his aspirations he will come to see himself as a self-directed learner, making use of the learning resources center as a resource that is available to him on his terms for the rest of his life. There will be no such thing as graduation. There will be no such thing as adult education. There will only be lifelong education.

Boston, Massachusetts
August, 1972
NOTES


Planning for retirement involves making personal and financial decisions to ensure a secure future. This includes understanding retirement benefits, creating a budget, and making savings and investment plans. Learning about retirement planning can help individuals make informed decisions and prepare for the future.

As individuals move into middle age, they often face new challenges and opportunities. These can include changes in work, relationships, and personal interests. Adjusting to these changes can involve compensating for any losses and finding new interests.

In addition to personal adjustments, individuals may also need to plan for family changes. This can include preparing for children's education, career development, and personal interests. Dealing with these changes may involve collaborative efforts, such as working together to make decisions and support one another.

Moreover, parents may need to consider how to prepare their children for the future. This can involve helping them develop skills and values that will help them succeed in life. It also includes planning for the future and preparing for retirement, which can involve teaching financial management and other critical skills.

Overall, planning for retirement and dealing with changes in life are crucial aspects of middle age. By making informed decisions and taking proactive steps, individuals can ensure a secure and fulfilling future.
Adult-Vocation and Career:

Adjusting to retirement
Finding new ways to be useful
Understanding Social Security, Medicare, and Welfare

Home and Family Living:

Preparing for death
Devising a new time perspective
Developing a new self-identity
Keeping an open mind

Personal Development:

Keeping up personal appearance
Keeping curious
Keeping in touch with young people

Relating to children
Learning to live alone

Establishing new intimate relationships
Putting your estate in order
Putting new ways to be useful

Preparing for death
Adapting to death of spouse
Establishing new living arrangements
Developing compensatory abilities

Understanding the aging process
Re-examining your values
Keeping your morale
Keeping up your morale

Keeping curious
Finding a new self-identity
Keeping an open mind

Keeping up personal appearance
Keeping in touch with young people

Preparing for death
Devising a new time perspective
Developing a new self-identity
Establishing affiliations: with the older age group

- Finding new hobbies
- Learning new recreation
- Getting appropriate exercise
- Adjusting to decreasing strength and health
- Keeping fit
- Changing your diet
- Getting regular medical exams
- Getting appropriate exercise
- Using drugs and med.
- Learning to deal with stress

Community Living

- Working for improved conditions
- Giving volunteer services
- Working for improved conditions
- Working for improved conditions
- Working for improved conditions

Leisure

- Establishing affiliations
- Adult
- Employment of leisure
- Health
- Community living
- Planning a balanced recreation program
- Learning new recreation
- Getting regular medical exams
- Getting appropriate exercise
- Using drugs and medication
- Learning to deal with stress
- Adjusting to decreasing strength and health
- Keeping fit
- Changing your diet
- Getting regular medical exams
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