Symposium

Self-Education: The Process of Life-Long Learning

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The authors worked together for three years developing Walkabout-Challenge-Self-Education concepts and practices. In this article they describe the growing acknowledgment world-wide that educational services must train people and provide support systems for life-long self-directed education. To manage the difficult transition from authority-directed to self-directed learning, they developed a four stage program: influential parenthood; initiative training for elementary school students; challenge education for secondary students; and self-education training and support services for adults. All are now in various stages of implementation. Drawing on the literature and their experience, they outline ten basic elements of programs designed to teach self-education, including visualization, learning-style, personal curriculum planning, risk experiences, and self-culture.

Les auteurs ont travaillé durant trois ans à développer les concepts et les étapes pratiques du projet "Walkabout-Challenge-Self-Education" – fondé sur la pédagogie par projet. Dans cet article, ils expliquent que partout à travers le monde, on considère de plus en plus important que les services d'éducation doivent préparer efficacement les individus en conséquence et favoriser une éducation permanente autonome. Afin de faciliter la transition entre l'apprentissage dirigé et l'apprentissage autonome ils ont conçu un programme en quatre étapes: des parents efficaces; l'entraînement à l'autonomie pour les élèves du primaire; l'éducation par défi pour les étudiants du secondaire; l'apprentissage autonome et les services de soutien aux adultes. Tous sont mises en application, bien qu'à des degrés divers. A partir de leur documentation et de leur expérience, ils ont défini les 10 principaux éléments de programmes visant l'enseignement de l'auto-formation comprenant entre autres: les modes de représentation; les styles d'apprentissage; la préparation d'un programme d'études; les expériences audacieuses; la culture personnelle.

The most important frontier of education is the vast, undeveloped realm of human experience that lies outside the narrow boundaries of formal schooling. The great majority of people are not enrolled in educational institutions. Less than one per cent of a person's life is spent in classrooms. Even the best educated adults have five decades or more still to live after they graduate. Yet the need for learning does not diminish. If anything, it becomes greater, more urgent, during adult life. How can this need be met? How can the educational potential of this huge and growing nonschool population be developed? A grand expansion of the educa-

tional empire would be impractical. The cost would be prohibitive, and many people would refuse to return to the classroom. But we can adapt the educational institutions we have to teach people how to teach themselves, how to design and pursue their own learning. And we can create community resources which help them to execute the self-educational programs they design.

Self-education in one form or another is already a reality. Infants teach themselves to walk, to talk, to play and even to read (Kendall, 1980). School children learn new social roles, hobbies, and jobs; they may even master such difficult technical fields as electronics through their own learning efforts after school hours. Adults learn in their own ways and by their own means to manage their lives, to be marriage partners and parents, to find pleasure through avocations, to deal with personal problems – such as aging and divorce – and to become proficient in their jobs. Some even become recognized world experts without the aid of formal training (Gibbons et al., 1980). The research of Allen Tough (1979) – now replicated by many others – shows that over 90% of adults conduct at least one deliberate learning project every year. The average is five such projects for a total investment of 500 hours per person. Over 70% of these projects are self-initiated and directed, and no more than 20% involve formal educational institutions. Self-education, therefore, is a reality. Most of these casual, self-educational activities are modest in scale and in learning outcomes, but their potential is great. By training students in the skills of self-education and by organizing businesses and the community to facilitate and promote self-directed learning, this potential can be tapped. With the increased achievement that results, who knows what other positive outcomes may also occur?

From such research as Tough's, a new image of adults as active self-directing learners is already emerging, and with it a new vision of the function of formal educational institutions. Evidence of this vision is rapidly accumulating. In *Learning to Be* (Faure, 1972), the report of a broadly representative Unesco committee, self-education is described as the essential ingredient of future developments in both formal and informal learning: "The new educational ethos makes the individual the master and creator of his own cultural progress. Self-learning ... (therefore) has irreplaceable value in any educational system" (p. 209). John Gardner (1963) spoke for a number of reform advocates, and reflected the conclusions of a number of recent national committees on education, when he declared that "the ultimate goal of the educational system is to shift to the individual the burden of pursuing his own education." A number of institutions are already making that shift. The Association for Supervision and Curriculum Development (ASCD) announced in early 1979 that they would begin developing and promoting programs in self-education through statewide networks, some of which are already in operation. The National Institute of Education, in the same year, adopted

Malcolm Knowles' program in self-directed learning for their nation-
wide career education programs. The Council for the Advancement of
Experiential Learning (CAEL), under the direction of Morris Keeton, has
established an American and Canadian network of institutions which
provide university credit for informal, self-directed, and experiential
activities with demonstrable educational value. The Kettering and Lilly
Foundations have combined to create a model of self-directed learning
for secondary schools. Other organizations such as the New York Council
of Education and Educational Testing Service are also developing self-
educational programs.

Despite these proclamations and trends, however, there are very few
operating school programs deliberately designed to increase students'
initiative and teach them the skills they need for a life of self-education.
There are good reasons for this failure, some of them directly traceable to
the state of the self-educational art. While we know self-education is a
reality, we are not clear about its nature – how it is different from other
forms of education and what stages a person goes through in becoming
successfully self-directed. Also, while we know there is a growing interest
in teaching for self-education, we are not clear about how best to get the
job done – how to teach people to direct their own learning, how to help
students solve the problems they face in becoming self-directed, and what
kind of community environment will encourage people to continue
growing through self-education for the rest of their lives.

THE NATURE OF SELF-EDUCATION

Self-education occurs outside of formal educational institutions, not
inside them. The skills can be taught and practiced in schools, teachers
can gradually transfer the authority and responsibility for self-direction
to students, and self-educational acts can be simulated, but self-education
can only truly occur when people are not compelled to learn and others
are not obligated to teach them – especially not to teach them a particular
subject-matter curriculum. While schools can prepare students for a life
of self-education, true self-education can only occur when a person
chooses to learn what he can also decide not to learn.

Given this limitation, what can be done in the institution of formal
education to prepare people to be self-educating when they leave? A great
deal, but only if major changes are made in traditional schooling. To
highlight and examine those changes, let us compare the main features of
schooling as it is with schooling as it would need to be for self-education
(see Table 1). Each of these comparisons deserves elaboration.

Control
The most significant difference between school education and self-
education is that in school control over the learning process lies primarily

TABLE 1
The Major Differences Between Traditional Schooling and Self-Education

Traditional Schooling	Self-Education
–Control over decisions about learning and responsibility for outcomes lies with the teacher and other authorities.	–Control over decisions about learning and responsibility for outcomes lies with the individual.
–The teacher initiates activities, is the central performer, and maintains student effort through a program of motivation and discipline.	–The individual initiates activities, is the central performer, and maintains effort through self-motivation and self-discipline.
–The teacher exercises skills in content selection and organization, choice of learning style, and evaluation of the learning performance.	–The individual chooses what to learn, by what learning method, and according to what standard of success.
–The teacher sets the goals for learning, gathers the resources necessary, and manages the time and effort required.	–The individual sets the goals, arranges the supplies and contacts needed, and supervises his own activities.
–Learning is usually content-oriented, presented in abstract or theoretical form through the medium of print.	–Learning is more often activity-oriented and experiential, involving direct contact with concrete objects and interaction with practitioners.
–The content to be learned is derived mainly from the disciplines of knowledge.	–The content to be learned is derived from the needs, interests and aspirations of the individual.
–Socialization tends to be toward obedience to authority and dependence upon the demands and services of institutions.	–Socialization tends to be toward independent decision making and interdependence with others for learning.
–Involves pursuing many different subjects in a fixed pattern and set time frame.	–Involves a greater concentration of effort in a single activity or field pursued in a flexible time frame.
–Attempts to make everyone minimally competent in the same or similar curriculum of knowledge and skills.	–People attempt to become as competent as possible in a field or activity of their choice selected from a great range of possibilities.
–The individual is usually evaluated by authorities and in competition with other students, on the same subject matter and by the same method of evaluation.	–Individuals usually evaluate themselves in comparison with their own earlier performances in their own special activities in ways appropriate to them and the activities.

with the institution, but beyond school control lies primarily with the individual. Those who control a process shoulder the major responsibility for its results. School graduates experience a sudden and dramatic shift from obeying the external controls of the school to establishing an internal locus of control over their own education, and an equally dramatic shift to responsibility for the success or failure of their efforts. Schools do not employ strategies designed to prepare students to manage this shift, nor do they give students supervised practice in responsible control of their own learning. The skilful exercise of control is essential to teaching oneself effectively.

Initiative

Self-education is energized by individual initiative. It requires enterprise to plan and launch an educational activity, and it takes determination to keep going until the task is successfully completed. To maintain a determined effort, especially in the face of difficulties and obstacles, the individual must have developed a capacity for self-discipline in the pursuit of activities and accomplishments he values. In school, teachers do most of the initiating; they are the major actors to their largely passive student audiences, and they maintain the students' pursuit of the institution's goals by programs of reward for success and punishment for failure. This general practice of managing student effort does not develop the initiative they will need to manage their own education.

Teaching Skills

The skills employed by teachers in teaching students are the very skills people must master in order to teach themselves successfully. The teacher chooses what the class will learn, how they will learn it and according to what standards. These are precisely the process skills self-educators must learn in order to manage their own educational experiences. Valuable for self-directed learning in general, these skills are essential if self-directed learners can ever be expected to conceptualize programs with sufficient breadth, depth, and richness to merit the title of self-education.

Management Skills

In schools the teacher does most of the work, setting up each lesson, securing and utilizing the necessary materials, supervising the effort the students put in and the progress they are making, telling them when to begin and when they are finished. But these management skills are as essential as the teaching skills to anyone responsible for his own learning. Self-educators must set up their own lessons, manage their own learning environments, deal with failure as well as success, decide when to start and finish, and monitor their own progress according to their own schedule of expectations. To help students master this management task, communities might be designed to make their human and material resources for learning as available as possible.

Learning Style
In school, students most often learn subject matter from a book while sitting at a desk in a classroom. Studying abstract ideas through an abstract medium within a very restricted environment is a limited learning style. Self-education requires a much greater range of options so that people can develop styles rich and diverse enough to accommodate their own individual differences and to make learning more desirable than other activities. If learning is not pleasurable and rewarding, people will not choose to do it. Self-education, therefore, includes more experiential forms of learning and production-oriented activities. People more often learn by doing and by consulting experts. Knowledge, seldom acquired for its own sake, is related to technique, learning how to do something in order to complete a project.

Purpose
The main purpose of schooling reflected in most curricula is the mastery of the disciplines of knowledge based on the decisions of experts or authorities, or upon the consensus of community opinion. The purposes of self-education arise from the needs, interests and aspirations of the individual. They arise from people's desire to make their lives better. Schools, maintained by obligatory attendance, teach students what they are required to learn and in the process often completely separate schooling from their personal lives. People stop thinking of themselves as natural learners. Self-education reverses the process, making systematic study a part of life.

Relationships
By maintaining control, dulling initiative and insisting upon obedience, schools cultivate students' dependence for learning upon teachers and institutions. Many assume that to learn a particular thing they must return to the classroom. But self-education is characterized by independence and interdependence. By each act of self-education, the person asserts, practices, and cultivates his capacity for independent action. This does not mean that the individual necessarily acts in isolation. His success will depend to a considerable extent upon the confidence and self-esteem he has generated through sustained relationships with others, and upon the support network he has established. To be self-educated one must be independent rather than dependent, but independence is only possible through interdependence, and this often involves learning and acting in co-operation with others.

Focus
In school, students study a range of different subjects in scheduled time, spending less than an hour on each, in a fixed order for the duration of the course. This diverse but possibly fragmenting approach contrasts with

the more common pattern in self-education where people focus on one activity in natural time, working at it when they can until they complete it or abandon it. The exception is the occasional project that develops into a life-long learning mission, as in the case of the person who builds a workbench he needs, goes on to practice carpentry and eventually becomes an expert full-time professional cabinetmaker. This focussed but possibly narrow approach permits a concentration of effort, but as the self-educator becomes more dedicated and expert, it may lead him purposefully into a number of other fields. The cabinetmaker, for instance, may study timber, period furniture designs, new tools and techniques, business cash flow calculation, and so on.

Competence

Schools are responsible for making every student minimally competent in the same general bodies of knowledge and skill. In self-education the range of possibilities is as broad as the range of activities pursued throughout the community. Once active in a field of their choice, students seldom seek minimal competence. They usually attempt to become as proficient as they can, and excellent, if possible, because it is their field of choice and they closely identify with it. Students in school seek excellence, too, but it is possible only for a few to achieve it. In self-education all students can pursue excellence in a field of their choice and be successful.

Evaluation

In schooling, evaluation is out of the students' hands, is nearly always based upon a written test – even when the topic is how to do something – and seldom has any integral part in the students' learning. In self-education, people usually evaluate themselves in the performance of the activity they are attempting to master, and they evaluate in order to measure their progress and to help them decide what to learn next. Self-educating cooks evaluate their cooking, sculptors their sculpting, and politicians their legislative effectiveness. In school, students compete on the same test against an abstract norm and, from the results, are sorted into levels of success and failure. In self-education, people who are usually doing quite different activities compete with their own previous perform-ance and so may always be successful in improving and extending. Self-educators inevitably compete also, but then in the open market, by choice, and in their area of special competence.

Two conclusions can safely be drawn from this general comparison: first, self-education is dramatically different from institutional education; second, institutional education – as it is currently designed – is generally inappropriate preparation for a life of self-education, and in some ways confounds the process, though it may perform its own particular job very well.

Before addressing the problem of teaching for self-education, one

footnote to this comparison must be made. All education – including schooling – is to some degree self-education. We participate more or less in all we learn. Even when someone writes a message on the slate of our minds without our conscious awareness, it is the slate of our minds, and if we act on that message we are the actors responding in what has become our own thought. But if we think of the continuum that stretches from minimal "self-education" to the kind of conscious control over one's behaviour described in this section, then the willingness to unquestion-ably accept the lessons others wish to impose upon us must be placed very low upon the scale. While we may go along with the idea of behaviourists, advertisers, and the media that the environment has a profound effect on our chameleon natures, we should also recognize a behavioural paradox – whatever we can make people do by structuring their environment, they can learn to reverse by structuring their own.

Self-education is founded on the assumption that people may like chameleons but do not need to be like them, that to be fully human is to be in control of oneself and responsible for one's actions. This may only be the beginning of what the person – that organism so magnificently designed for learning, for change and for growth – is capable of attaining. It seems to us a worthy goal to pursue that capability. Seaching for the upper limit of our capacities may be the most worthy goal of all, in that we may thereby come to realize ourselves and have all the more to contribute to others. The question is, how can people be prepared to conduct this self-educational enterprise?
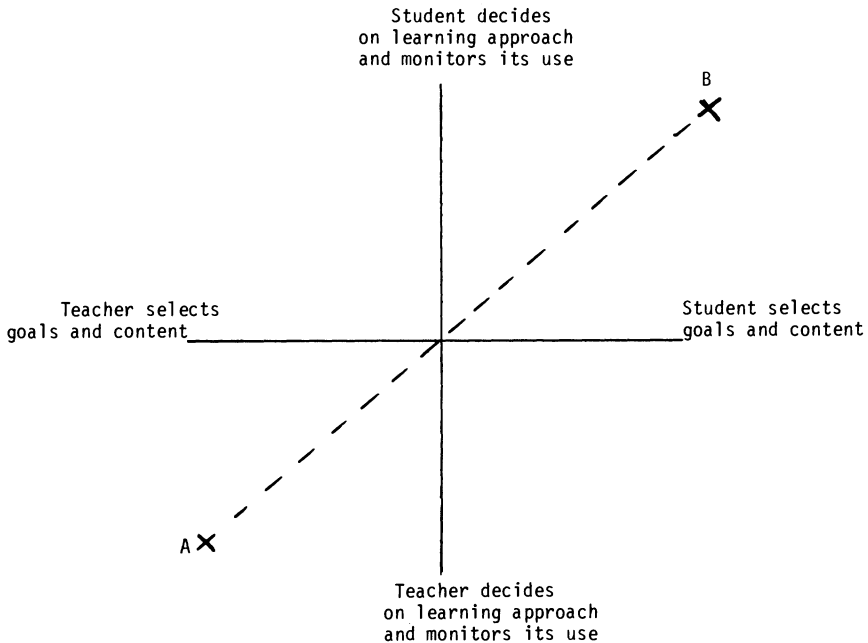
TEACHING FOR SELF-EDUCATION

Self-education is for people of all ages in all walks of life pursuing all manner of learning activities. If programs designed to help them become self-educators are successful, they will graduate with the desire, skill, and initiative to pursue learning in new areas without others compelling them to do so. What should these programs be like? In the future, when we have responded to the self-education imperative, the job will be made easier by parents who are models of self-education themselves and encourage initiative in their children. These parents will be assisted by a community designed to encourage self-education and to provide the resources people need to pursue it. In all lines of work people will be given opportunities and incentives for continuous on-the-job learning. In such circumstances a distinctive and complete form of teaching for self-education may emerge. In the meantime the main task is to create a model of schooling with graduates already skilled and experienced in the rigours of self-education.

An effective program for such teaching must accomplish three major transitions: from teacher-directed to student-directed learning; from student-directed learning to guided-self-education; and from guided self-education to the independent pursuit of excellence. The first of these

FIG. 1.

The Transition from Teacher-Directed to Student-Directed Learning

Student decides
on learning approach
and monitors its use

B
✗

Teacher selects
goals and content_____Student selects
                                                         goals and content

A✗

Teacher decides
on learning approach
and monitors its use

involves teaching students, for whom content and learning method are currently prescribed, how to choose their own learning materials and methods (see Figure 1). The second involves learning to relate one's day-to-day studies and activities to the greater issues of one's life, society, culture, and world, while still under the guidance of the school. The third transition is from school to adult life and the beginning of the true self-education. In our opinion, all three transitions should be primary responsibilities of the school. The most feasible way to accomplish this is by establishing a system (see Figure 2) in which the teacher-directed portion of the program gradually diminishes as instruction, experience, and maturity enable students to become self-directed in more and more of their learning activities, to become more self-educating in the breadth of conception within which their learning activities are designed, and finally, to make the major transition from school to adulthood. By the time the student reaches this final point of schooling, he should be functioning almost completely on his own, and should be able to demonstrate his readiness for self-education and the voluntary pursuit of excellence.

Our examination of the related literature and our experience with a number of programs designed to accomplish these transitions indicate that the following principles (see Table 2) are important guidelines in any teaching for self-education.

FIG. 2
The Transition to Self-Education Through Schooling
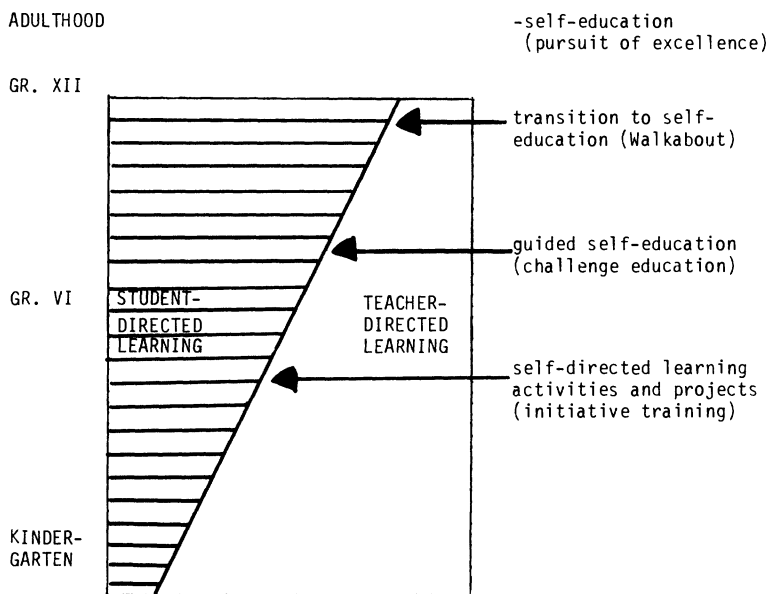
Vision
Goal statements are necessary but insufficient guides to self-educators. A clear mental picture of their successful functioning and enjoyment of competence is essential to guide their learning and to motivate their effort. The vision is both a device for learning and a self-fulfilling anticipation. Becoming a skilful visualizer and forming personal visions creates the stimulant to action which arises from the discrepancy between what is and what could be. These visions grow from the interests, talents, needs, experiences, opportunities, and dreams of each individual.

Style
Such typical school activities as reading textbooks and doing practice exercises are useful elements in any person's learning repertoire, but the authors have identified fifty or more additional methods of learning by which people become expert. These additional ways tend more to involve action, direct experience, experimentation, social interaction, and feeling, especially pleasurable feeling. Consulting an expert, forming a co-operative team, teaching the activity, and making a contract with yourself to meet a risky challenge are a few examples. The starting point for self-education is the unique way each individual learns; the goal is to enrich the individual's style until it becomes the most productive and pleasurable form possible. Ideally each person will develop a unique style so satisfying it will become a preferred, voluntary way of being in the world for a lifetime.

TABLE 2

Guidelines for the Development of Programs for Self-Education

Vision	People are more likely to pursue S-E when they have a highly desirable vision of their own excellence, one they believe they can achieve.
Style	People will develop more enduring patterns of S-E if they are based upon a uniquely suitable learning style, one which can gradually be extended to include the broadest possible range of ways people learn, change, and grow.
Practice	People preparing for S-E must practice planning, implementing, managing and evaluating their own programs of learning.
Expertness	A program of self-education must be designed for each student to become an expert, competent in a recognized activity, even though that means accepting as many different fields as there are students.
Superstructure	Programs in S-E are most effective when they provide a gradually diminishing superstructure within which people can make their own decisions and program structures.
Demonstration	People will pursue S-E with greater determination in school when they are working toward a significant public demonstration of their accomplishments and a joyful celebration with ritual community power.
Teaching	Teaching for a transition to S-E requires high impact methods leading to a transfer of ownership and responsibility for learning to the student. Such teaching has four phases: one organizational; one presentational; one transitional; and one supportive.
Interaction	Preparation for S-E requires a balance between working on one's own and working with others. The self-educator must be experienced in forming learning networks, in conducting co-operative ventures, and in caring for others.
Risk Experiences	Since S-E is energized by personal initiative, preparation for the process involves learning to set oneself strategic, risk-laden experiences in order to learn, change and grow continually.
Self-Culture	Self-education transcends immediate utilitarian goals of learning. The expert learns to ask what breadth, perspective, and involvement are needed to achieve excellence as a person.

Practice

To become self-educators people must do more than learn about the process, they must practice it regularly, overcome difficulties and polish their technique until they become skilful at the complex business of directing their own learning. This means learning and applying a range of process skills: setting goals, planning the experiences by which those goals will be achieved,[1] gathering the resources necessary, launching the project, monitoring progress and modifying the activity where necessary, evaluating success and failure and utilizing that information in planning the next set of activities. As students progress through school, the practice becomes more complex and of longer duration until, at the end of grade twelve, the program is composed entirely of individual and group-directed activities. The test of the school's staff will be how well it has prepared students for the task.

Expertness

Failure is not a suitable preparation for anything but more failure. Preparation for self-education is preparation for fulfilling one's strengths and interests, and one's real – not merely possible – needs. Every person can become skilful and expert in some particular field if the focus is sharp and the approach to mastery is rich. Once people have become successful in a field, they have method, confidence, and hope for the task of broadening the range of their studies and for the future. For the school this means broadening the range of possible fields of study, providing an array of school and community resources – materials, sites and people – and building a structure which permits more natural activity time than scheduled time.

Superstructure

Students require a framework which outlines their responsibilities, but for self-education they also require the opportunity to make their own decisions. For this reason, a superstructure which describes the general nature of the task but leaves to the student the design of the structure of the tasks themselves, is an ideal organizational pattern. Walkabout (Gibbons, 1974), for instance, involves a superstructure of five or more challenge areas – adventure, service, logical inquiry, practical application, and creative expression – within which students design their individual programs. Challenge education (Gibbons and Phillips, 1979a) involves a superstructure of challenge areas within which students write learning contracts negotiated with a planning team, including a parent as well as a teacher. But even these superstructures are designed to gradually disappear so that students, finally, make all of the educational decisions for themselves.

Demonstration

The problem of evaluating students who are all working on different tasks in different ways can be solved by making them regularly demonstrate that they have improved upon earlier performances in a particular activity. Artists, for instance, will show their art, tracing from earlier to more recent work the strategic improvements they planned and achieved. Students working in science, social skills, or technological fields would work out equally appropriate demonstrations of progress. By being responsible for demonstrating improvement, students learn the guiding function of evaluation in self-education. By basing evaluation on demonstration rather than written tests, the school gives students a more appropriate test of competence and maintains emphasis on learning for doing. By evaluating the improvement of their later performances over earlier ones, students compete with themselves and can all be continually successful.

The demonstration that terminates a study period is important, but the most important is the final demonstration at the end of schooling. That demonstration of the student's ability to take complete responsibility for learning gains considerable force if it is public, involving family and members of the community as well as peers and school faculty. It gains additional power and meaning if it is regarded as a rite of passage marking the student's transition from school to adulthood. This graduation event has its greatest significance, and therefore, its greatest power to guide students, if the ceremony celebrates the student's recently demonstrated skill in self-education. At the heart of that ceremony will be a ritual reflecting the community's pride in the achievements of its young people.

Teaching

Our experience is that students have a difficult time making the transition from teacher-directed to self-directed studies. In another paper (Gibbons and Phillips, 1978) we describe how initial enthusiasm fades when students confront the rigours of self-education, how failure leads to depression, and depression to crisis. In any true transition to self-direction this nadir of confidence seems inevitable, and with it the students' and parents' low point of confidence in teacher and program. As a result, the crisis for the student is also a crisis for the teacher. The institution and parents must be prepared for this moment so they can help rather than attack the program. To help students through this difficult passage – a vital teaching moment – the teacher must employ particularly high impact methods such as first-time experiences, positive self-fulfilling prophecies, involvement with significant others, challenges, and the relationship of learning to vital student concerns. Students succeed most often when they take sufficient pride in independence and self-direction to accept responsibility for their own learning as they work through the transition.

As the student progresses, the teacher's role changes (Gibbons and Phillips, 1979b). In the beginning, teachers are directive. They conduct such *organizational* activities as implementing a superstructure, setting up student support groups, establishing a network of community sites for various kinds of supervised experiences, and involving the parents in activities to cultivate the initiative of their children. And they make *presentations* to the class, teaching such processes as self-instruction, personal program planning and evaluation; they also lead discussions, and take or send students into their first community experiences. As soon as students begin acquiring independence, teachers begin a strategic withdrawal. They still are very manipulative during the *transition* phase, but as students emerge from the dark night of the struggle to become self-directed, teachers spend more time monitoring their progress, maintaining the pursuit of excellence and *supporting* their learning efforts.

Interaction

Development in self-education requires interaction and interdependence as well as solo action and independence. On the one hand, a supportive social network provides us with the assistance and security needed to launch ambitious endeavours; on the other hand, the individual quests for identity, knowledge and attainment enable us to return to the group better prepared to enrich it. Similarly, on the one hand, skilful self-educators learn to establish learning networks of informants, guides, masters, colleagues, and collaborators who will be informal teachers, fellow students, and partners in enterprise; on the other hand, self-educators willingly become part of other people's networks. Finally, they contribute to the well-being of others as others will contribute to them. In helping others they not only fulfill their needs but contribute to their own sense of worthiness.

Risk Experiences

To become successful self-educators, people must develop a life-long habit of entrepreneurial learning. Such enterprise is risky business. Failure as well as success are personal, and visibly so. Yet, as Abraham Maslow (1962) points out, learning does not occur without change, and change does not occur without risk. It is characteristic of the healthy personality to regularly reach beyond the known and familiar in pursuit of new knowledge, skill, relationships and accomplishments. In fact, these are the means of growing into a healthy personality as well as the sign of its attainment. For these reasons, it is essential that schooling for self-educators begin with assigned experiences, then negotiated experiences and, finally, self-planned and initiated enterprises. This progression develops the student's desire and ability to risk what is necessary to discover what they can learn, accomplish, and become as people.

Self Culture

Teaching for self-education begins by establishing tasks that require student initiative, develops into self-directed learning, and culminates with self-culture. Students learn to pursue understanding and achievement, to become expert, and then to develop the breadth and perspective associated with an educated person. To the questions – Can I act on my own? Can I become expert in this field of activity? – we add – Can I become excellent as a human being? The question of what constitutes a life of quality is more influentially defined by parents and the community, but the school can make a beginning and may become influential in reminding parents and members of the community of their powerful effect on the values of the young.

PROGRAMS FOR SELF-EDUCATION

An individual teacher or a group of teachers can teach for a future of self-education while working within existing curricula, but with some difficulty in a traditional setting. We have attempted to extend the principles of teaching for self-education into total programs (see Table 3) for parents encouraging independence in their children, for elementary school teachers cultivating initiative in their students, for secondary teachers (and university professors) challenging their students to excel, and for communities designed to support self-education among people of all ages.

Influential Parenthood

Since attitudes and behaviour patterns established in infancy and childhood tend to be enduring, it is particularly important that parents be taught to encourage and reward their children's independence rather than to act for them or restrain them. During the child's first efforts to turn over, for instance, the parent should cheer the child on and celebrate any success rather than steal the initiative or frustrate it. During the early years parents can also supply the materials, the place, and the indistracted time necessary for self-initiated learning through play. If they also play with the child, respond, but minimally to questions and requests for help, and by their own self-directed learning activities daily show the child a good model of initiative, independence and learning, they will greatly increase the likelihood of their child being an active self-directed learner. By forming Influential Parenthood Groups, parents can share ideas and materials, solve problems, work together to create influential experiences, and help each other to become models of self-education for their children.

Initiative Training

The most important goal of training for self-education in the elementary school is the transfer of the child's habit of learning casually through play to a self-conscious, intentional effort to learn through planned activities.

TABLE 3
Self-Education Programs Developed By the Authors

Period	Program	Main Characteristics
Childhood	Influential Parenthood	−Parents form Influential Parenthood Groups −Parents model self-directed learning. −Parents create environments that encourage initiative. −Parents systematically relax constraints on children and increase their responsibilities. −Parents encourage the child's action and management of consequences: they do not direct or rescue.
Elementary School	Initiative Training	−Students conduct individual and group learning projects. −The group creates a project proposal and approves individual proposals. −Completed individual projects are presented to the group, group projects to the class or grade. −Projects are related to school subjects and personal interests. −Students prepare for a public Learning Fair at the end of elementary school.
Secondary School (And, with adaptations, college and University)	Challenge Education	−Students meet with individual planning teams (i.e., themselves, a teacher and a parent or substitute). −Students write and negotiate learning contracts for each area of study.

It is not known whether this transfer is best accomplished by formalizing what the child chooses for play, as in the Montessori method, by waiting for the child to invent or discover an activity, as in Summerhill's afternoon program, or by assigning the child or a group of children an unspecified activity within the framework of subject-area studies. We feel the child should have the opportunity to explore and discover, but, after a reasonable time, must decide and act. New ideas may be thought of later,

TABLE 3 (*Concluded*)

		—Students conduct the activities in school and the community.
		—Students prepare for a Walkabout, intensive challenge in several areas of activity, followed by a public demonstration of attainment.
Adulthood	Self-Education Services	—Short-term programs are offered to teach the *S-E* process and help individuals form *S-E* support groups.
		—Resources for *S-E* are organized to be accessible to the public at large (e.g., books, materials, tools, work-space).
		—Individuals are helped to build consultant networks.
		—Community is organized to engage everyone in meaningful activity for a portion of each week.
		—Catalogues of experiences, presentations, and services are maintained to extend awareness and interests.
		—Professions and business organize collegial teams, time and resources for on-the-job development.
		—*S-E* is promoted by media as part of fitness.

but they can easily be tried the next time. Because deliberation – weighing alternatives and their possible results – is important, we have students discuss their individual proposals with their support group, and design proposals for group activities among themselves, before approaching the teacher. As students progress, they develop special interests in which they become knowledgeable and skilful. And in the final year, or years, the products of these skills are displayed in a learning fair at which students lay out or demonstrate their best accomplishments.

Challenge Education
At the secondary level, students are challenged to excel in a number of areas. These areas may be school subjects, the Walkabout challenge areas

– adventure, artistic expression, logical enquiry, academic concentration, practical applications and service – or some other. Students cite their own goals individually and in groups, plan their own learning activities and set up their own evaluation process. These plans are negotiated with their learning committee, which includes a parent, a teacher and possibly, a member of the community. When these contracts are agreed upon and the role of each participant is clear, the student launches his program, which is regularly monitored by the teacher. After a number of such "units," students enter an intensive activity in which they strive toward their most ambitious goals in their desired fields – the musician may plan to play for friends, make the school band, or play in a local nightclub, depending on what is an appropriate challenge for that particular person. When these intensive activities are successfully completed, the students prepare their presentation to the community and await ceremonial acceptance as adults. Planning committees, tasks, challenge contracts, demonstration, and celebration can all be adapted for a university course or program. A well-run doctoral program is a paradigm of preparation for self-education.

Self-Education Services
Courses may continue to be part of any adult's learning program, but the greatest emphasis will be on learning acts, projects, and missions designed and implemented by individuals themselves. In the beginning, short courses on self-directed learning with support groups to help initiate students, may be necessary, but over the years, the most valuable community contribution to self-education will be the organization of learning services – opportunities, consultants, resources, and facilities. In a community designed for self-education, businesses and professional groups will arrange time, rewards, resources, and contacts for people learning more about their work. Opportunities will be provided for people to experience the unfamiliar and to try working at something new. And activities will be organized so that everyone – no matter what the age or disability – can work or provide a useful service for some portion of each week. Such self-educational activities will be promoted by the media as necessary parts of spiritual and psychological well-being.

What outcomes do we expect from such programs? What ideal person do we envision? What community? What world? First of all, we seek any improvement possible in the occurrence, duration, depth, and range of such self-directed learning projects as those reported by Tough. A ten per cent increase in voluntary learning, for instance, would represent a major achievement in initiative and competence, with who knows what benefits to the community as well as the individuals involved. Ideally, we envision self-educating people who voluntarily pursue excellence, who not only strive to become excellent in their special fields, but also attempt to define and live lives of quality. This quest without end, the ultimate drive and

purpose of self-education, subsumes and integrates those pursuits described by many as man's reason for being: striving to find a meaning in life (Frankl, 1969), finding our real selves beneath all our surface behaviour (Rogers, 1977), finding a way of acting that makes us feel worthwhile (Gilmore, 1974) fiinding out what we can accomplish and become (Maslow, 1962), loving and being loved (Glasser, 1965), and fulfilling our personal obligation to search for the truth and state our findings (Polanyi, 1958).

We believe that the script of the future has not been written, that we are fully responsible for what occurs to us and around us, and that we can learn – and having learned, we can decide – to make the future what we will. Our future begins with a shared vision, composed of shadowy but already discernible features. It posits a world which has learned to use technology for humanizing purposes, in which the needs of people are met without violating the needs of the environment, the purposes of nations are secondary to the purposes of humanity as a whole, and education and the community are committed to the individual's discovery of how well he can learn, relate, and act throughout his lifetime. We can be made passive, we can be forced by ignorance and circumstances to forfeit our fulfillment, but our potential – always ready to be triggered, and to be realized by acts of our own will – is for initiative, creative expression, caring, productivity, participation, action, and celebration. Self-education seeks to trigger that potential as early as possible and to encourage people to seek its fulfillment throughout their lives.

NOTE

[1] Malcolm Knowle's program in Self-Directed Learning is designed to teach these skills.

REFERENCES

Faure, Edgar. *Learning to be*. Paris: Unesco, 1972.

Frankl, Viktor. *The will to meaning*. New York: New American Library, 1969.

Gardner, John. *Self-renewal: The individual and the innovative society*. New York: Harper and Row, 1963.

Gibbons, Maurice. Walkabout: Searching for the right passage from childhood and school. *Phi Delta Kappa*, 1974, 55(9), 596–602.

Gibbons, Maurice. *The new secondary education: A Phi Delta Kappa task force report*. Bloomington, Indiana: Phi Delta Kappa, 1976.

Gibbons, Maurice with Bailey, Alan, Comeau, Paul, Schmuck, Joe, Seymour, Sally, & Wallace, David. Toward a theory of self-directed learning: A study of experts without formal training. *Journal of Humanistic Psychology*, 1980, 20(2), 41–46.

Gibbons, Maurice & Phillips, Gary. Helping students through the self-education crisis. *Phi Delta Kappa*, 1978, 60(4), 296–300.

Gibbons, Maurice & Phillips, Gary. Unlimited potential: The case for negotiated learning contracts. *NASSP Bulletin*, 1979a, *63*(431), 55–60.

Gibbons, Maurice & Phillips, Gary. Teaching for self-education: Promising new professional role. *The Journal of Teacher Education*, 1979b, *30*(5), 26–28.

Gilmore, John V. *The productive personality*. San Francisco: Albion, 1974.

Glasser, William. *Reality therapy: A new approach to psychiatry*. New York: Harper and Row, 1965.

Kendall, Janet. The self-taught reader: Three studies of pre-school reading acquisition. Simon Fraser University, 1980 (Mimeographed).

Knowles, Malcolm. *Self-directed learning: A guide for learners and teachers*. New York: Associated Press, 1975.

Maslow, Abraham. *Toward a psychology of being*. Toronto: Van Nostrand, 1962.

Polanyi, Michael. *Personal knowledge*. New York: Harper and Row, 1958.

Rogers, Carl. *On personal power: Inner strength and its revolutionary impact*. New York: Dell, 1977.

Tough, Allen. *Major learning efforts: Recent research and future directions*. Ontario Institute for Studies in Education, 1979 (Mimeographed).

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