## CHAPTER II

## SELF-TEACHING IN EDUCATIONAL THOUGHT AND PRACTICE

Throughout history some adults have planned and conducted their own learning without much assistance from professional teachers. Twenty-four centuries ago Socrates, as a young man, followed his own course of reading and studying. Benjamin Franklin has been called "an example par excellence of what we today call the 'self-educated intellectual.'" During the 1750's Edward Gibbon, author of The History of the Decline and Fall of the Roman Empire, acquired a large amount of knowledge both by himself and from his tutor. Gibbon described his learning thus:

Every man who rises above the common level has received two educations: the first from his teachers; the second, more personal and important, from himself. . . . My worthy tutor had the good sense and modesty to discern how far he could be useful: as soon as he felt that I advanced beyond his speed and measure, he wisely left me to my genius.<sup>2</sup>

During the nineteenth century John Stuart Mill devoted a chapter in his autobiography to his "Last Stage of Education and First of Self-education"; his life and thought were greatly influenced by reading about the French Revolution, conversing with "instructed men," attempting to write in order to learn, and organizing a small group of young men to discuss Utilitarianism. In the United States, many people consider Abraham Lincoln "the greatest of the self-educated leaders in American history." Winston Churchill found that it was not until the age of twenty-one that "the desire for learning came upon me"; he then began to spend four or five hours a day reading history, philosophy, and economics.

At present, although many adult education programs have become available, it is still true that much of an adult's learning occurs outside these programs. Children and adolescents, too, can teach themselves certain things. Indeed, several experimental programs in schools and colleges have tried to increase the extent to which students plan, control, and supervise their own learning. In addition to encouraging young people to teach themselves certain knowledge

<sup>&</sup>lt;sup>1</sup>C. Hartley Grattan, In Quest of Knowledge: A Historical Perspective on Adult Education (New York: Association Press, 1955), p. 140.

<sup>&</sup>lt;sup>2</sup>Edward Gibbon, *The Autobiography of Edward Gibbon*, ed. Oliphant Smeaton (London: J. M. Dent & Sons Ltd., 1911), p. 66.

<sup>&</sup>lt;sup>3</sup>John Stuart Mill, Autobiography of John Stuart Mill: Published . . . from the Original Manuscript in the Possession of Columbia University (New York: Columbia University Press, 1924), pp. 44-60.

<sup>&</sup>lt;sup>4</sup>Grattan, op. cit., p. 140.

<sup>&</sup>lt;sup>5</sup>Winston S. Churchill, A Roving Commission: The Story of My Early Life (New York: Charles Scribner's Sons, 1941), p. 109.

and skills during their years of formal education, these programs also attempt to prepare the students to continue self-teaching during their adult years. In such programs it is assumed that successful experiences in self-teaching at school or college will increase a person's interest and competence in self-teaching throughout adulthood.

The present chapter will describe several programs in which some of the responsibility for planning and controlling the learning was shifted from the professional teacher to the learner himself. Relevant discussions in the theoretical literature will also be mentioned.

## Individualizing Instruction in Schools

The earliest tradition in American schools was that of each student learning his lessons by himself and reciting them for the teacher; indeed, "the village schoolmaster of 1800 knew no other technique." In Canadian schools, too, the almost universal method about 1830 was for the pupil to work individually at learning his assignments. Such methods displayed certain weaknesses that are not inherent in self-teaching and individual study. Often, the student's chore was to memorize dull, detailed material from textbooks which lacked illustrations and simple explanations and his motivation for study arose from fear of punishment rather than from any positive desire to learn.

During the nineteenth century graded classrooms and group instruction became common in North American schools. By the end of that century some educators realized that oral instruction by one teacher to a class of thirty students had certain drawbacks. Consequently, several attempts to individualize instruction in the schools arose. In the present section a series of such attempts will be traced from the 1880's through to the 1930's.

These attempts to individualize instruction incorporated self-teaching in that each learner was encouraged to work toward clear objectives individually and at his own pace, without much assistance from a teacher. Usually the work was divided into units or assignments that lasted several days. The student learned primarily from printed materials such as detailed work books and job sheets; such materials provided complete instructions plus several practice tests that the student corrected himself. In a few of these materials, the instructions were so detailed that the student had little opportunity to plan his own learning activities. Another difficulty in the attempts to individualize instruction was the need for each teacher to develop a new attitude before he could use individual

<sup>&</sup>lt;sup>1</sup>Thomas H. Briggs et al. Laboratory Techniques of Teaching: The Contribution of Research to Teachers Planning the Individualization of Instruction (New York: Bureau of Publications, Teachers College, Columbia University, 1938), p. 4.

<sup>&</sup>lt;sup>2</sup>Charles E. Phillips, *The Development of Education in Canada* (Toronto: W. J. Gage and Company, 1957), p. 141.

<sup>&</sup>lt;sup>3</sup>H. G. Good, *A History of American Education* (2d ed.; New York: The Macmillan Company, 1962), p. 393.

methods effectively. One publication noted that "the conventional conception of teaching is 'doing something to the child' in contrast with 'assisting the child to do something to himself."

A form of individualized instruction, under the direction of Preston Search, was in use in Pueblo, Colorado as early as 1888. Under this Individual Progress Plan, most students in a classroom worked at different assignments while the teacher moved from one to another, guiding or assisting, and determining when each student was ready for his next assignment. 3

Frederic L. Burk, while president of the San Francisco State Normal College, also initiated a form of individualized instruction. In a report in 1913 he described his "exercise books" which made it possible for each elementary school pupil to proceed at his own pace and which freed the teacher to give individual help. Burk noted the great interest, earnestness, and absorption among the pupils. Writing twenty years later, in 1933, Billett declared that "Burk must be regarded as one of the pioneers in a broad movement which has gained increasing momentum during the quarter of a century just passed and which now appears sufficiently powerful to remove the lockstep permanently from the ranks of accepted techniques of classroom procedure."

Before becoming superintendent of schools at Winnetka, Illinois, Carleton W. Washburne worked under Burk for five years. Washburne moved to Winnetka in order to demonstrate that the Normal School procedures were practicable and desirable in public schools, too. Instruction in certain subjects was completely individualized by means of printed objectives, explanations, exercises, and tests for each unit of subject matter. Each student was classed as self-reliant or supervised; self-reliant students then budgeted their own time. When students who had learned under these individualized techniques entered high school, they were

<sup>&</sup>lt;sup>1</sup>Guy Montrose Whipple (ed.), Adapting the Schools to Individual Differences, Twenty-fourth Yearbook of the National Society for the Study of Education, Part II (Bloomington, Illinois: Public School Publishing Company, 1925), p. 250.

<sup>&</sup>lt;sup>2</sup>Roy O. Billett, *Provisions for Individual Differences*, *Marks*, and *Promotion* (Office of Education Bulletin, 1932, No. 17; Washington: Government Printing Office, 1933), p. 289.

<sup>&</sup>lt;sup>3</sup>Harry N. Rivlin (ed.), *Encyclopedia of Modern Education* (New York: The Philosophical Library of New York City, 1943), p. 640.

<sup>&</sup>lt;sup>4</sup>Billett, op. cit., pp. 289-290.

<sup>&</sup>lt;sup>5</sup>*Ibid.*, p. 291.

<sup>&</sup>lt;sup>6</sup>Carleton W. Washburne and Sidney P. Marland, Jr., Winnetka: The History and Significance of an Educational Experiment (Englewood Cliffs: Prentice Hall Inc., 1963), p. 17.

<sup>&</sup>lt;sup>7</sup>Billett, op. cit., pp. 292-295.

above average in all five major subjects, and also participated and held office to a greater extent in extracurricular activities. 1

The Dalton Plan, which grew out of the work of Search and Burk, was devised by Helen Parkhurst. She introduced it into the school system of Dalton, Massachusetts about 1920. Each student budgeted his time for each day, and was free to move from one "subject matter laboratory" to another whenever he wished. Each month in each subject he received a "job book," which was a set of mimeographed guide-sheets outlining his work. Good pointed out that the Dalton Plan promoted freedom with responsibility in that each student could work in his own way and at his own rate. Too many students, however, accepted the freedom without the responsibility.

About 1931 a survey of certain secondary schools using individualized instruction, a laboratory plan, a problem or project plan, or a contract plan found that "methods of organization, administration, and classroom procedure are essentially alike" in these schools regardless of which name they used. <sup>6</sup> Each plan included materials that enabled each student to master a definite unit of subject matter and thus reach certain objectives. These guide sheets usually presented directions for study, references for reading, a list of supplementary projects, an outline of minimum essentials, and a tentative time allotment. Sometimes the sheets also included an "approach" paragraph to stimulate curiosity and interest, a set of objectives, necessary explanations, notes about special difficulties, examples of how to do the required work, and additional elective work. <sup>7</sup>

Apparently most of these individual study materials left the student to plan his methods and discover information by himself; they did not prescribe a rigid detailed strategy. Certain students were able to explore fields of special interest because if they mastered the minimum essentials, they were given a choice of supplementary topics and activities. In addition, students learned to work individually without frequent assistance from a teacher; most teachers would answer questions only after the student had tried to find the answer for himself.<sup>8</sup>

The attempts to individualize instruction in elementary and secondary schools during the first three decades of the present century were closely related to

<sup>&</sup>lt;sup>1</sup>Carleton Washburne and Louis Edward Raths, "The High-school Achievement of Children Trained under the Individual Technique," *Elementary School Journal*, XXVIII (November, 1927), 223.

<sup>&</sup>lt;sup>2</sup>Good, op. cit., p. 429.

<sup>&</sup>lt;sup>3</sup>Rivlin, op. cit., p. 213.

<sup>&</sup>lt;sup>4</sup>Billett, op. cit., p. 272.

<sup>&</sup>lt;sup>5</sup>Good, *op. cit.*, p. 429.

<sup>&</sup>lt;sup>6</sup>Billett, *op. cit.*, p. 321.

<sup>&</sup>lt;sup>7</sup>*Ibid.*, p. 333.

<sup>&</sup>lt;sup>8</sup>*Ibid.*, p. 342.

certain other movements, in particular, the progressive education movement which promoted the notion that the student should govern himself and have free use of an environment rich in material things; parents and teachers sought to extend the area in which the child was encouraged to make decisions on his own. The project method, too, emphasized the value of having the student plan how to achieve certain definite goals by directing his own activity.

Recent Examples of Self-teaching in Schools

During the 1950's and 1960's, self-teaching has been an important component of a variety of experimental programs in elementary and secondary schools. In addition, several writers and reports have urged that the control of classroom teachers over the learning of their students be reduced.

The 1950 yearbook of the National Society for the Study of Education noted that previous discussions of educational methodology had focused on the teacher and had assumed that the teacher "ran the show." The 1950 yearbook did not accept this assumption; instead, it "focuses attention upon the learner and makes his activity (implicit as well as overt) the central problem of instruction."

Speaking to a group of educators in 1952, Carl Rogers made one of the best known statements recommending that teachers not play the all-important role in learning. Two excerpts from his statement follow:

It seems to me that anything that can be taught to another is relatively inconsequential, and has little or no significant influence on behavior.

The only learning which significantly influences behavior is self-discovered, self-appropriated learning. Such self-discovered learning, truth that has been personally appropriated and assimilated in experience, cannot be directly communicated to another.

In 1959 Trump's report recommended that secondary-school students spend about 40% of their time in individual study activities. In this way students

<sup>&</sup>lt;sup>1</sup>Good, op. cit., p. 392.

<sup>&</sup>lt;sup>2</sup>Rivlin, op. cit., p. 613.

 $<sup>^{3}</sup>Ibid.$ , p. 615.

<sup>&</sup>lt;sup>4</sup>Nelson B. Henry (ed.), *Learning and Instruction*, Forty-ninth Yearbook, Part I (Chicago: The National Society for the Study of Education, 1950), p. 337.

<sup>5</sup>Ibid.

<sup>&</sup>lt;sup>6</sup>Carl R. Rogers, "Personal Thoughts on Teaching and Learning," *On Teaching Adults: An Anthology*, ed. Marilyn V. Miller (Chicago: Center for the Study of Liberal Education for Adults, 1960), p. 69.

would be required "progressively to take more responsibility for self-direction." Students would engage in a wide range of individual activities in libraries, workshops, museums, and laboratories; teachers would be available as consultants. 2

About the same time, in a discussion of homework, Strang recommended that students be allowed "more initiative and choice in the matters of what and how and when and with whom to study." She included "stimulation of initiative, independence, responsibility, and self-direction" and "development of permanent leisure interests in learning" as two objectives of home study. One could also note that self-teaching not only occurs when the student does daily homework, but also may occur when he misses a class, writes an essay or term paper, or studies for an examination. It is even possible that teachers who are ineffective at presenting and explaining subject matter unwittingly promote self-teaching: the students may have to perform a great deal of self-teaching in order to pass the examination.

The 1962 yearbook of the National Society for the Study of Education declared that schooling and education "have become synonymous" in the United States; this fact "has had the unfortunate effect of supporting the notion that education takes place only in the presence of a professional teacher." The teacher's role must change for any experiment with self-teaching to be successful. As students assume more responsibility for planning and directing their own learning, the teacher's role becomes that of consultant or resource person. Although counseling theory may be moving somewhat away from its early nondirective stage, "the new concept of the teacher may be moving toward a nondirective position."

Four specific attempts to promote self-teaching in the schools have been of particular significance.

The term *self-selection* has been applied to one of these attempts. Olson has described attempts to demonstrate that children will select books that meet their level of maturity and their needs, for both reading and arithmetic, and perhaps for other school subjects. The reasoning underlying his attempts is as follows:

<sup>&</sup>lt;sup>1</sup>J. Lloyd Trump, *Images of the Future: A New Approach to the Secondary School* (Urbana: Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, 1959), p. 10.

 $<sup>^{2}</sup>Ibid.$ 

<sup>&</sup>lt;sup>3</sup>Ruth M. Strang, "Homework and Guided Study," *Encyclopedia of Educational Research*, ed. Chester W. Harris (3d ed.; New York: The Macmillan Company, 1960), p. 678.

<sup>&</sup>lt;sup>4</sup>*Ibid.*, p. 677.

<sup>&</sup>lt;sup>5</sup>Nelson B. Henry (ed.), *Individualizing Instruction*, Sixty-first Yearbook, Part I (Chicago: The National Society for the Study of Education, 1962), p. 43. <sup>6</sup>*Ibid.*, p. 270.

The healthy child seeks from the environment those experiences that are consistent with his maturity and his needs. . . . Throughout nature there is a strong tendency for life to be sustained by the self-selection of an environment appropriate to the needs of the plant, animal, or human being. If the appropriate environment does not exist ready made or is inadequate in some major respects, the human being also works creatively for the conditions that advance his well being.

Teachers may use the principle of self-selection as a means for bringing together the nurturing qualities in books with the seeking tendencies in children. 1

Olson reported an unpublished study by Bernese D. Ault of the use of the self-selection principle in arithmetic in the third and fourth grades. Children were allowed to sample and inspect workbooks of different levels of difficulty; they then went to work on the one they preferred. On the whole the children were sound in the judgment of their abilities. Children often started with quite simple materials and progressed through several grade levels during the school year. <sup>2</sup>

A second example of self-teaching in the schools is the recent use of programmed instruction and teaching machines. Three of the major principles of programmed instruction—(a) that the student should learn from printed materials rather than from the teacher or the group, (b) that he should learn at his own pace, and (c) that he should test his own progress—are reminiscent of the guide sheets and job books used for individualizing instruction.

One particular study that involved programmed instruction is especially pertinent to an understanding of self-teaching. This study used programmed materials to investigate the effect on learning of "the degree to which the student directs and controls the learning process." The subjects represented the lower half of achievement in ninth grade mathematics. One group learned some mathematics through a small-step linear program; the other group was given similar materials that permitted the student a great deal of choice in selecting the particular materials and sequence that he desired. This "self-directed" group learned about as well as the first group. The authors stated that increasing the amount of student control over the learning process may motivate the student, and will enable him to adjust the style of learning to his own temperament and personality. In addition, the authors suggested that the students with freedom to direct their own learning might have learned much more effectively if they were not hindered

<sup>&</sup>lt;sup>1</sup>Willard C. Olson, *Child Development* (2d ed.; Boston: D. C. Heath and Company, 1959), p. 402.

 $<sup>^{2}</sup>Ibid.$ , pp. 406-407.

<sup>&</sup>lt;sup>3</sup>Lyle W. Bivens, Vincent N. Campbell, and Donald F. Terry, Self-direction in Programed Instruction: Effects on Learning in Low-ability Students (Washington: U. S. Office of Education, Department of Health, Education, and Welfare, 1963), p. 1.

<sup>&</sup>lt;sup>4</sup>*Ibid.*, p. 7.

<sup>&</sup>lt;sup>5</sup>*Ibid.*, p. 1.

by the strong habit of linear study methods in lower grades or if they had received some coaching in using self-directed materials. One of the authors reported another study in which a week of "practice in self-direction" resulted in better performance by the students who learned mathematics under self-direction.

Breaking the students' passive set "to be taught" seemed to be the critical factor in these practice sessions. In both mathematics and geography verbal instruction alone was not sufficient to jog the learner out of his strongly ingrained habit of acquiescence and into the active role of organizing and evaluating his own learning.<sup>2</sup>

The high school that forms part of the laboratory school at the University of Chicago has provided two other examples of self-teaching. In 1958, during the last month of the school year, six sophomore students "were set free for personal inquiry" during almost half of each school day. These students "were encouraged to formulate any problems that intrigued them and then go after them in their own ways." Each of the students experienced great difficulty in discovering the real problem or basic need with which he should have dealt. Nonetheless, Thelen concluded "that we have terribly underestimated what students can do and that, given a chance, their capabilities and interests can be startling." In another work Thelen discussed various ways in which teachers can try to increase self-teaching among students, so that each student will follow his own problems and interests, set his own pace, and select his own resources.

In the same high school in 1962 an Independent Study Program involving all freshman students was initiated. In certain subjects at certain times during the week, a student could choose from among "silent independent study, laboratory work, formal group discussions, teacher-led discussions, bull sessions, work in the library, working with special material resources, and individual teacher-student conferences." It was found that students often worked together on one project or met in small groups; rarely did one student plan and carry through an individual project. 9

<sup>&</sup>lt;sup>1</sup>*Ibid.*, p. 7.

<sup>&</sup>lt;sup>2</sup>Vincent N. Campbell, "Research on Self-directed Learning in the Classroom," *Programed Instruction*, IV (November, 1964), 4.

<sup>&</sup>lt;sup>3</sup>Herbert A. Thelen, *Education and the Human Quest* (New York: Harper and Brothers, 1960), p. 90.

<sup>&</sup>lt;sup>4</sup>*Ibid.*, p. 91.

<sup>&</sup>lt;sup>5</sup>*Ibid.*, p. 95.

<sup>6</sup>*Ibid.*, p. 94.

<sup>&</sup>lt;sup>7</sup>Herbert A. Thelen, "Preparation of Teachers in the Future," *Improving Instruction in Professional Education*, Thirty-seventh Yearbook (Cedar Falls, Iowa: The Association for Student Teaching, 1958), p. 115.

<sup>&</sup>lt;sup>8</sup>Willard J. Congreve, "Toward Independent Learning," *The North Central Association Quarterly*, XXXVII (Spring, 1963), 301.

<sup>&</sup>lt;sup>9</sup>Interview with W. J. Congreve, May 21, 1964.

Examples in Colleges and Universities

Several experimental programs in colleges and universities have encouraged certain students to teach themselves. A major aim in some of these independent study programs has been to develop in the students an interest and competence in self-teaching that will continue through adulthood.

One of the earliest attempts to provide and evaluate an independent study program was conducted at Stanford University during the 1930's. This program was provided for superior students during their first two years. During individual conferences with professors a program was developed for each student in which he read critically and then wrote about his reactions. 1

After several years the faculty at Stanford stated that through independent study a student can progress faster, correlate and integrate his learning, and increase his interests. Such a student reads from two to five times as much as other students, and develops a genuine love of reading and learning. However, independent study may lack perspective, organization, and thoroughness.<sup>2</sup> The students found that they developed initiative and independent habits of study, but had some difficulty in avoiding the temptation to flit from one area of interest to another.<sup>3</sup>

During this early experiment at Stanford University the faculty became aware of the importance of including sufficient counseling and supervision in an independent study program. A faculty committee stated the following principle: "The instructor, taking into consideration the individual needs, interests, desires, and abilities of the student, gives him a chance to progress at his own rate and with as much independence as he is capable of . . . "4 The committee emphasized that the student should be "directly and closely supervised" during independent study. 5 At first, "students were pushed into an independence of supervision which they did not seek and through which they did not profit . . . . Independent study does not mean 'independence' of either subject or teacher."6

During recent years, several colleges and universities have been vigorously encouraging and experimenting with a variety of independent study programs. Such programs vary in the amount of freedom that a student has in choosing his topic, strategy, and resources. They also vary in the amount of time a student spends in classes and in the amount of contact he has with his professors through individual conferences. In general, however, independent study programs encourage the student to make his own decisions without much assistance from faculty members and to handle many of the problems that arise during his efforts to achieve some definite goal.

<sup>&</sup>lt;sup>1</sup>Edgar Eugene Robinson, *Independent Study in the Lower Division at Stanford University 1931-1937* (Stanford University, California: Stanford University Press, 1937), pp. 1-13.

<sup>&</sup>lt;sup>2</sup>*Ibid.*, pp. 64-66.

 $<sup>^{3}</sup>Ibid., pp. 69-73.$ 

<sup>&</sup>lt;sup>4</sup>*Ibid.*, p. 65.

<sup>5</sup>Thid.

<sup>&</sup>lt;sup>6</sup>*Ibid.*, p. 14.

At least three writers have recently discussed the definition or meaning of independent study. Bonthuis pointed out that independent study is called by various other names, such as honors courses, senior thesis, individual study, special problems, and independent reading. He defined the term independent study as "the pursuit of special topics or projects by individual students under the guidance of faculty advisers apart from organized courses." Baskin, however, has stated that one important new aspect of experimentation with independent study is its use with all students in a course as part of the teacher's procedures for that course. He defined independent study as independent work or reading, sometimes on one's own ("lone wolf" method) and sometimes in small groups or teams, with such work taking place in the absence of the teacher and in lieu of certain regularly scheduled class meetings. Another book in the "New Dimensions in Higher Education" series declared that independent study suggests the active involvement of students better than any other current phrase, but inquiry is "a more precise term."

Some recent directions in the independent study movement were suggested by Hatch and Bennet. They stated that at present independent study is designed for most or all students—not just superior students. It is begun in the freshman year; otherwise the passive role engendered by the conventional methods of previous years may make independent study "difficult, irksome, or distasteful." It is flexible, and is an integral part of the college's program. The teacher plays an important role. The recent importance of independent study is suggested by the inclusion by Hatch of the following item in a set of standards of quality for comparing colleges: "Quality may be indicated in colleges that are most successful in involving their students in independent study." In addition, in 1960 Eckert stated that independent study programs "have increased substantially in the past quarter-century" and Hatch and Bennet listed eighty-five studies and published articles dealing with such programs. Nonetheless, Eckert suggested that more systematic research was required into the problem of "how colleges can best develop intellectually self-reliant persons."

<sup>&</sup>lt;sup>1</sup>Bonthuis, op. cit., p. 6.

<sup>&</sup>lt;sup>2</sup>*Ibid.*, p. 8.

<sup>&</sup>lt;sup>3</sup>Samuel Baskin, Quest for Quality: Some Models and Means ("New Dimensions in Higher Education," No. 7; Washington: U. S. Government Printing Office, 1960), p. 3.

<sup>4</sup>Ibid.

<sup>&</sup>lt;sup>5</sup>Winslow R. Hatch, *What Standards Do We Raise?* ("New Dimensions in Higher Education," No. 12; Washington: U. S. Government Printing Office, 1964), p. 9.

<sup>&</sup>lt;sup>6</sup>Hatch and Bennet, op. cit., pp. 5, 21.

<sup>&</sup>lt;sup>7</sup>Hatch, op. cit., p. 9.

<sup>&</sup>lt;sup>8</sup>Ruth E. Eckert, "Colleges and Universities - Programs," *Encyclopedia of Educational Research*, ed. Chester W. Harris (3d ed.; New York: The Macmillan Company, 1960), p. 282.

 $<sup>^9</sup>$ Hatch and Bennet, op. cit., pp. 12-18.

<sup>&</sup>lt;sup>10</sup>Eckert, op. cit., p. 282.

Evaluations of the degree of success of independent study programs range from optimistic to pessimistic. Hatch found both successful and unsuccessful programs; he declared that "on the mistaken belief that independent study or inquiry is an end in itself, it is managed poorly on many campuses. It is managed well at only a relatively few colleges." Summarizing certain experiments, Eckert stated that students pursuing independent study achieve as well academically as control groups, and seem to acquire abilities and attitudes favoring continued independent study. In a review of a wider range of experimental independent study programs, McKeachie formed the following less optimistic conclusions:

As with other comparisons of teaching methods, few differences have been found between achievement of students working independently and those taught in conventional classes. Moreover, the expected gains in independence have also often failed to materialize. Students taught by independent study do not always seem to develop greater ability or motivation for learning independently.<sup>3</sup>

Hatch and Bennet, too, declared that "the almost universal complaint of faculties and students" is that the independent study program with which they are familiar "does not achieve the 'plus values' they expected of it." McKeachie concluded that "the paucity of positive results suggests that we need more research on methods of selecting and training students for independent study experiments."

In colleges and universities throughout the United States, perhaps even broader changes in teaching methods—not labelled "independent study"—are increasing the frequency and significance of self-teaching. Axelrod has traced the development of three major teaching styles: student-centered, client-centered, and group-centered. He reached the following conclusions:

In each of these processes, the same end is foreseen. The student-client-member emerges from his contact with the instructor-counselor-leader, if the process has been successful, ready to work under his own power. He is now able to instruct, counsel, and lead himself.

. . . The instructor's ultimate success with a student is to be judged by the extent to which he becomes unnecessary.  $^6$ 

Examples in Adult Education

In 1930 a professor of education declared emphatically that adults, too, are

<sup>&</sup>lt;sup>1</sup>Hatch, op. cit., p. 9.

<sup>&</sup>lt;sup>2</sup>Eckert, op. cit., p. 280.

<sup>&</sup>lt;sup>3</sup>W. J. McKeachie, "The College Teacher and Creativity," Bulletin of the Bureau of Social Service, College of Education, University of Kentucky, XXXVI (June, 1964), 63.

<sup>4</sup>Hatch and Bennet, op. cit., p. 2.

<sup>&</sup>lt;sup>5</sup>Wilbert McKeachie, *Teaching Tips: A Guide-book for the Beginning College Teacher* (4th ed.; Ann Arbor: The George Wahr Publishing Co., 1960), pp. 56-57.

<sup>&</sup>lt;sup>6</sup>Joseph Axelrod, "Group Dynamics, Nondirective Therapy, and College Teaching," Journal of Higher Education, XXVI (April, 1955), 205.

capable of teaching themselves. In an article on self-education he made the following statement:

There are some adults who say in effect that though they intend to get a great deal more education . . . they no longer need the help of personal-contact teachers for that purpose. They have reached the stage where they can teach themselves, thank you!  $^{\rm l}$ 

More than thirty years later, in a chapter called "The Autonomous Adult Learner," Miller stated that "a recurring theme in the literature of adult education is the desirability of the self-propelled learner who does not need to be dependent on an instructor or a group or an institution." He also noted the potential importance of self-teaching in adult education, as follows: "The provision of opportunities for guided independent study for adults has been a largely unexplored area in adult education; yet, as a proven methodology in other fields, it seems peculiarly appropriate for many adults who do not respond to established programs."

Competence in self-teaching is felt to be an important skill for adult educators as well as for the people they educate. Twelve adult education professors at twelve universities were asked to rate the extent to which each of forty objectives was represented in their graduate programs. The objective that received the highest rating was the following: graduates of the program "can carry on self-directed study." <sup>4</sup>

In recent years a variety of adult education institutions have encouraged and assisted adults who wanted to teach themselves. Three recent examples of adult education programs that emphasize self-teaching are the special degree programs for adults at Brooklyn College and Goddard College, a correspondence program at the University of Georgia, and a Chicago school for adults that employs programmed instruction.

Apparently certain serious problems arose in the self-teaching component of the experimental degree program for adults at Brooklyn College. Describing this program, Stern declared that one cannot achieve all of the objectives of education

David Snedden, "Self-education: A Needed Emphasis in Current Proposals for Adult Education," Journal of Adult Education, II (January, 1930), 33.

<sup>&</sup>lt;sup>2</sup>Miller, op. cit., p. 203. In a footnote Miller adds that "Cyril Houle, at the University of Chicago, has been much interested in the adult who goes on learning on his own and has done considerable exploration and encouraged his students to do more of this theme."

 $<sup>^{3}</sup>Ibid.$ , p. 226.

<sup>&</sup>lt;sup>4</sup>Martin N. Chamberlain, "The Professional Adult Educator: An Examination of His Competencies and of the Programs of Graduate Study which Prepare Him for Work in the Field" (unpublished Ph.D. dissertation, Dept. of Education, University of Chicago, 1960), pp. 144-145.

by independent study alone, without "a real teacher." At least one major objective of liberal education "can be attained only through inspiration by and personal involvement with a dedicated teacher and not through mere books, syllabi, or laboratory exercises. If the goals of a college education are to be achieved, even by accelerated methods, there are obviously limits to the use of independent study, honors work, exemption examinations, programmed instruction, and TV lessons." Discussing the same program, Liveright and De Crow made the following statement:

Limits were soon discovered, too, in the degree to which independent or informal study could substitute for instruction and interaction with the faculty. Even these highly selected and superior students tended to flounder when left too much to their own devices. The students themselves recognized this and expressed their views vigorously . . . They called for more tutors and more group study.  $^3$ 

At several other universities, too, special degree programs for adults have emphasized or given credit for individual study (sometimes off the campus) and for tutorials. Indeed, McGrath declared that the following are two major premises or features that should characterize a degree program for adults:

Full advantage will have to be taken of all types of devices and opportunities for self-education. Already many such aids exist.

Greater emphasis must be placed on evaluation of learning acquired through a wide variety of experiences other than systematic, regular sessions in the classroom.

. . . The notion that one can learn only as he sits in a series of prearranged intellectual experiences must give way to the concept that motivated adults may learn more efficiently and quickly on their own. 4

At Goddard College, students enrolled in the Adult Degree Program are encouraged to pursue independent study during the periods between resident seminars. While on the campus, each adult works out an independent study plan with one faculty member. This plan includes the resources he will use and these are limited only by his imagination and his physical setting. It also specifies the way in which he will report his progress each month to his study supervisor; the methods of communication may include correspondence, telephone, and occasional visits to the campus.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup>Bernard H. Stern, Never Too Late for College: The Brooklyn Degree Program for Adults (Chicago: Center for the Study of Liberal Education for Adults, 1963), p. 3.

 $<sup>^{2}</sup>Ibid., p. 4.$ 

<sup>&</sup>lt;sup>3</sup>A. A. Liveright and Roger De Crow, *New Directions in Degree Programs Especially for Adults* (Chicago: Center for the Study of Liberal Education for Adults, 1963), p. 18.

<sup>&</sup>lt;sup>4</sup>Earl J. McGrath, "Research on Higher Education for Adults," *Educational Record*, XLV (Winter, 1964), 95.

<sup>&</sup>lt;sup>5</sup>Letter from Miss Evalyn Bates, Director of Adult Education and Community Services, Goddard College, Plainfield, Vermont, to the Center for the Study of Liberal Education for Adults, May 1, 1964.

The University of Georgia has begun an experiment in "independent study through dispersed groups." Each home study student in a course called "Basic Issues of Man" is encouraged to select whatever aspects of the course are of greatest interest to him, and to work individually at his topic. He is also encouraged to communicate with other students on special memo forms. A student may also prepare a paper dealing with his special interest, and may submit it to a faculty committee for comments. Thus the University of Georgia program adds correspondence between students to the more usual correspondence between student and faculty.

Regular correspondence study, too, frequently encourages a large amount of self-teaching. In correspondence study the adult is "on his own, sets his own deadlines, makes his own decisions, and learns to organize." For the "self-motivated and self-motivating" adult, it is an excellent method of learning. 3

An experiment with quite a different form of self-teaching has been conducted at a school in Chicago. Working with high school dropouts, the Britannica Academy for Adults uses individual study almost exclusively. Because each student uses his own set of programmed and audio-visual materials, he can begin at any time and can progress at his own rate; he receives individual assistance from a teacher only when he seeks it. This arrangement seems to appeal to many young adults who decided not to continue attending a regular high school.<sup>4</sup>

Before concluding the discussion of self-teaching in adult education, an experimental research study with adults and a national survey should be noted. The experiment tried to demonstrate that "the use of study materials and procedures designed on the basis of information provided by research on learning will lead to faster student learning than the use by each student of his own set of techniques." Instead, the study found that students who used their own techniques did better on the post-test than students for whom the study techniques were prescribed. This study with adults, along with the study reported above dealing with Grade 9 mathematics, seems to indicate that people learn quite effectively from material alone when given a fair amount of freedom to adapt the materials to their own style of learning.

<sup>&</sup>lt;sup>1</sup>Letter from Miss Elizabeth Powell, Home Study Supervisor, Georgia Center for Continuing Education, June 18, 1964.

<sup>&</sup>lt;sup>2</sup>Charles A. Wedemeyer and Gayle B. Childs, *New Perspectives in University Correspondence Study* (Chicago: Center for the Study of Liberal Education for Adults, 1961), p. 26.

<sup>&</sup>lt;sup>3</sup>*Ibid.*, p. 25.

<sup>&</sup>lt;sup>4</sup>Interviews with the Dean, Franklin H. Chidester, June 25 and July 17, 1964.

<sup>&</sup>lt;sup>5</sup>Slater E. Newman, "Student vs. Instructor Design of Study Method," *Journal of Educational Psychology*, XLVIII (October, 1957), 328.

<sup>&</sup>lt;sup>6</sup> *Ibid.*, p. 331.

<sup>&</sup>lt;sup>7</sup>Bivens, Campbell, and Terry, op. cit.

A national survey conducted in 1962 by the National Opinion Research Center found that the phenomenon of self-teaching is common among adults. The report estimated that almost nine million adults in the United States carried on at least one important self-instruction project during the year preceding the interviews.  $^{\rm l}$ 

<sup>&</sup>lt;sup>1</sup>Johnstone, op. cit., p. 2.