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Developing self-directed learners in secondary reading lab

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Abstract

One of the major objectives of formal education should be developing skills which will assist individuals in self-directed learning activities once they graduate from high school. Educators tend to assume self-directed study skills are mastered when in reality the skills have not been a major concern for development in the classrooms. Generally at the secondary level teachers set the priority for mastery of course content rather than for development of study skills which would lead to independence in learning that content. The instructors prescribe activities, materials, and content according to their assessments of students' needs for the experiences to come in the real world and overlook the individual needs of students to develop the ability to be self-directed learners in a constantly changing world of knowledge.

DEVELOPING SELF-DIRECTED LEARNERS IN SECONDARY READING LAB

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INTRODUCTION

One of the major objectives of formal education should be developing skills which will assist individuals in self-directed learning activities once they graduate from high school. Educators tend to assume self-directed study skills are mastered when in reality the skills have not been a major concern for development in the classrooms. Generally at the secondary level teachers set the priority for mastery of course content rather than for development of study skills which would lead to independence in learning that content. The instructors prescribe activities, materials, and content according to their assessments of students' needs for the experiences to come in the real world and overlook the individual needs of students to develop the ability to be self-directed learners in a constantly changing world of knowledge.

Research has demonstrated that students have not graduated from high school with the ability to study independently. College students fail in their studies because they lack knowledge of study techniques and approaches (Guilford, 1976), and successful students have quite inefficient study skills. Their success is based on intellectual ability rather than study methods and better reading ability (Robinson, 1961). Tough (1978), in analyzing adults' major learning efforts outside formal education, concluded that adults were deficient in the following skill areas: clarifying needs, setting goals, locating expert assistance, finding information and materials, planning strategies for learning, budgeting time, and evaluating progress. Tough also found the average adult spends 500 hours a year in learning efforts usually motivated by the need to use a specific skill, such as, parenting, sewing, writing a report, leading a study, teaching a class. They chose independent learning rather than a structured

class because of their desires to self-pace, to use individual styles of learning, to remain flexible, and to structure their own project.

Because responsible self-directed learning does not "just happen" (Treffinger, 1978; Gibbons, 1978; Gibbs, 1977), teachers need to provide students with support and well-planned assistance in building independence. The high school reading laboratory is one area that can assist in this development. Study skills and reading skills are interrelated. Improved study skills should lead to improved reading skills because reading is a viable tool for studying. Skill achievement in both areas then should lead to better attitudes toward reading.

STATEMENT OF PURPOSE

The purpose of this paper is to present strategies for developing self-directed learners within the high school reading lab. One should realize the definition of self-directed learning given in this paper is the ultimate achievement to be gained by the end of thirteen years of development through the elementary and secondary school systems. Thus, the reading teacher is not expecting her students to achieve ultimate independence in learning within one semester of reading lab. Rather the goal is directed toward achievement of stages of independence within the reading lab program.

DEFINITIONS OF TERMS

Self-directed learning, independent learner, self-directed study, independent study, autonomous study are similar in intent. The self-directed learner is a person who takes his/her own responsibility to learn seriously. The learner is able to diagnose needs; to set goals; to structure time; to choose wisely the best mode of instruction, materials, and resources; to evaluate progress; to be personally and intellectually involved in his/her learning. The independent learner is a critical reader, creative thinker, and problem-solver. S/he displays positive attitudes toward learning, is realistic about what s/he can do,

and is committed to expanding skills and increasing knowledge necessary for life. Thus, responsible self-direction of learning is not being free to do what one wants to do without forethought when s/he feels like doing it, but rather responsible self-direction of learning is being able to determine the knowledge and skills necessary for life and to adapt the knowledge and skills into the individual's constructs of learning. Because of the connotations derived from "independent study," European schools saw that the term would hinder introduction of the new program into the traditional settings. These schools opted to call self-directed learning "autonomous study." The goal of autonomous study "...is to give pupils greater degree of responsibility in their learning of knowledge and skills." (Marbeau, 1976, p. 14.)

Open education has the same goals as described above according to this author.

Reading laboratory has an environment conducive to independent learning. A variety of multiple levels of materials for skill development are available. Various reading rate machines are present. A library of paperbacks and resources are available for independent reading and study. There are areas available for independent study and group work. Students are free to move to areas designated for various skill development and work. The teacher is available for consultation.

Self-directed study skills include the five general objectives for self-directed learning listed below:

1.) Learning to function more effectively in one's total environment (classroom, school, home, and community) with peers, teachers, parents, and other adults;

2.) Learning to make choices and decisions based on self-knowledge of needs and interests;

3.) Learning to assume responsibility for choices and decisions by completing all activities at a satisfactory level of achievement and in an acceptable time frame;

4.) Learning to define problems and to determine a course of action for their solution;

5.) Learning to evaluate one's own work and be able to answer the question, "How well can I do what I want to do?" (Treffinger, 1978, p. 15.)

Specific skills would include the abilities to think critically, creatively, and independently; to self-start and persevere; to solve problems which require skills in questioning, drawing inferences, and recognizing factual discrepencies; to study textbooks, to study for exams, and to take notes; to research for information; to organize information; and to read critically.

Reading skills would enhance study skills. Maloney (1974) suggests the following reading skills would help develop independent learners: improvement in word attack skills, vocabulary improvement, skimming and scanning techniques, improvement of learning techniques (i.e. SQ3R study method of a text, outlining), reading rate improvement. Other skills developed in reading would include ability to locate information and to recognize organizational patterns in paragraphs (i.e. cause-effect, definition, and so on). Critical reading skills include the abilities to read independently; to evaluate logic, value, and assumptions; to recognize truth; to think creatively; to ask questions and question answers; and to retain what is read to compare ideas (Dale, 1976).

REVIEW OF RELATED LITERATURE

Research indicated that benefits occurred when students participated in self-directed learning activities. Problem-solving ability and creative thinking improved (Torrance, 1972; Treffinger, 1975). Students at all levels of intelligence improved comprehension in reading when taught problem-solving skills (Covington, 1967). Retention of self-paced individuals proved to be significantly higher than teacher-paced individuals when tested a year after completing a college psychology course (Morris, 1978). Acquisition of self-directed learning skills led to increased positive attitudes toward reading and learning (Thomas, 1977; Horwitz, 1977) and increased curiosity which

Gruber (1962) called an attitudinal indicator.

Results of the effect of developing independent learning on reading achievement and overall academic achievement varied among researchers. Some experiments showed autonomous learning less productive with less able pupils (Marbeau, 1976), while Gruber (1962) found no evidence to support the hypothesis that the more able student did better in self-directed learning. Studies done by Pentecoste (1975) and Allen (1977) concluded that students who had externally-oriented locus of control could succeed in either student-controlled or instructor-controlled classes while students who were internally-oriented were impeded by instructor-controlled classes of reading.

Other studies indicated no real significant difference between teacher-directed approach and student-directed approach in reading improvement (Gruber, 1962; Henderson, 1976). However, Henderson did see a faster reading gain in a student-directed approach. Rogers (1976) found the informal approach did not impair reading achievement in the open classroom, and the students did display healthier attitudes toward school and learning.

Many studies showed favorable results when self-directed learning skills were incorporated in the classroom. A major study completed in England found reading improved after independent learning processes were incorporated into a reading-to-learn program and attitudes toward reading and learning also improved. This study demonstrated that the amount of time spent on independent learning skills correlated positively with achievement score gains (Thomas, 1977). In the Pre-Adult Model Reading Program reading was viewed as a tool of learning. Students were trained for nine weeks to achieve independence in working on reading improvement. The results after nine weeks indicated all made at least one year gain in rate and significant gains in comprehension and vocabulary compared to regular classroom reading activity (Larsen, 1979). In summarizing empirical evidence on the effectiveness of individually guided motivation, Ghatal (1975)

showed that participation in teacher-student conferences increased the amount of independent reading completed, developed more positive attitudes toward reading, and increased reading achievement scores. The analysis of research suggested that children continued to read independently after the conferences were discontinued.

One reading teacher hypothesized students' involvement in understanding their own learning processes and study habits would achieve better grades in geometry. Results showed that students who were in the experimental group did get better grades and could generate more questions on the posttest than the control group (Bragstad, 1975). Self-directed activities developed strongest inquiry method over group and teacher-planned activities in an undergraduate educational psychology course. All three groups improved while the control did not (Allender, 1979).

For teachers planning to implement self-directed learning in the classroom, the research indicated there would be problems. The changes in roles the students and teachers had to adjust to often caused emotional crisis (Marbeau, 1976; Gibbons, 1978; Gruber, 1962). Teachers found more work involved in facilitating self-directed learning than in traditional classroom procedures. Students often panicked at the change in expectations from being dependent learners. When this change occurred at the college level, the process was anxiety-producing and uncomfortable (Treffinger, 1973). However, once students were over the shock of freedom, they usually responded favorably.

To minimize or eliminate anxiety over possible failure in independent learning, the teacher would need to build a pattern of success (Morgan, 1978) which would lead to developing a weaning process for students to gradually break from the dependent learning to independent learning (Treffinger, 1975; Gibbs, 1977; Gibbons, 1978).

One final problem realized in the experimental efforts of Thomas (1977) and Marbeau (1976) was the lack of an adequate measurement of self-directed learning. Thomas developed an elaborate measurement called "The Learning Conversation" which was too complicated for the average teacher to implement. Adequate criteria would be hard to establish as one realized the complexity of divorcing all the learning skills from the reading skills.

STRATEGIES TO DEVELOP SELF-DIRECTED LEARNERS IN THE READING LABORATORY

At the onset the students must be aware that the responsibility of the teacher as directed by the school's administration is to see that reading skills improve. Therefore, the idea that students can do anything they want in independent learning has to be clarified. They may choose to study any topics as long as the activities assist in reading improvement. Thus, students may opt to do indepth research projects, independent reading of book selections, or activities concentrating on specific reading skill development. Overall objectives of the reading lab are as follows:

1.) To improve reading skills.
2.) To improve study skills.
3.) To acquire stages of self-direction in learning in the areas of setting objectives, assessing behavior, determining methods of instruction, and self-evaluating.
4.) To improve attitudes toward reading.

With these general objectives, the reading instructor has set the framework for the course. The students have to understand that their activities must be designed to achieve in these general areas.

The role of the reading teacher in a self-directed classroom should not be completely a passive role. The teacher should function as an advisor whom the students can consult freely. The student should be the originator of the interaction between student and teacher. Once the student asks a question, the teacher then may advise him/her of options s/he may pursue. However, the

teacher may feel free to intervene when it is obvious the students need guidance as long as the help does not become a directive, but provides directions for the students to pursue to make final decisions in their course of study. The teacher may ask questions, summarize discussions, help pull ideas together, organize for further progress, or assist in setting deadlines until students feel free to do so by themselves. The key for the teacher is to make no final decisions for the students. As students become more capable of handling their own self-direction, the role of the teacher becomes less active in the students' planning. However, the teacher remains active as she does background investigations into topics and seeks out available resources for projects students choose, so that she is prepared to follow the students' development in their topic and skill areas and to assist the students as the need arises.

Developing self-directed learners in the high school reading laboratory can create problems, especially when the students have been conditioned to teacher-directed methods from the past. Both students and teacher will experience stages of confusion and frustration, but these stages are important steps to overcome in the experiences of gaining independence in learning. Strategies for the transition from teacher-directed to student-directed learning are included in Appendix A (Gibbons, 1978). These are helpful in reducing the frustrations that will be experienced both by the teacher and student.

Since these stressful situations may lead to panic and a desire to give up as morale is threatened and the students do not feel success, this author proposes that students and teacher engage in a six-week training process which will prepare the students for self-directed learning. During this training the student is slowly led from teacher-directed activities toward self-directed activities. Treffinger's "Basic Model of Instruction" is a good guide to follow and is found in Appendix B.

Week 1

Students are introduced to the purposes of reading lab and told about self-directed learning. They then are given the Stanford Diagnostic Reading Test-blue level. Form A is used as a pretest and form B will later be used as a posttest. The results of the reading test are interpreted to the students. The students then complete the Estes Reading Attitude Scale and the Survey of Study Habits and Attitudes by Brown and Holtzman. Finally, students analyze the reading process. They observe each other's eye movement while reading a passage and concentrate on their own reading habits. What do they do while they read? They need to:

> Select a story, article, or section at least three pages long from a school book. As you read your selection, try to observe what you do as you read. For example, do your eyes move backward over the line of print? If so, why? Do they ever miss a line? Do you look at every single word? Do your eyes move faster than your mind? Do your thoughts wander? Where do they wander? Do you think of the meaning of each word or group words in phrases and thoughts?
>
> When you have finished your reading, write down immediately everything you noticed about your reading. You may be surprised at what you discover about your own reading. (Robinson, 1978, p. 61)

Once the students have analyzed their own reading habits, group discussions follow in which they share with their peers their reading habits, reading attitudes, and study habits. This is a step in learning to use others as resources instead of relying on their instructor for all answers. To determine the importance of reading, students are also introduced to Stickler's "The 'Affective Component' of the Reading Program" (Appendix C). To help build the concept of a good reader, Hunt (1970) offers these questions for students to think about each day:

> Did you have good reading day? Did you read well?
> Did you read better today than yesterday?
> Did you concentrate on silent reading?
> Did ideas of book hold attention?
> Did you want to read faster to find out what was going to happen?
> Was it hard to concentrate today? Why?
> Could you keep ideas straight?

Did you get mixed up?
Words you did not know? How did you figure them out?
When in good parts did you read faster or slower?
Were you counting number of pages had to go?
Did you want book to go on and on?

Class discussion on the concept of a good reader and how to improve performance to become a better reader is incorporated. This gives students a basis to begin developing their objectives for reading skill improvement.

Week 2

For their first study project, the students answer these questions:

1.) What is a self-directed learner?
2.) What reading skills would help to improve studying?
3.) Is there a better way to study?
4.) How can I improve my reading and study skills?

Putting these questions before the students introduces them to the first step in self-directed learning: asking questions. Students, individually or in small groups, then determine how they will obtain information to answer the questions.

At this point, the teacher instructs students on how to write objectives, create contracts, and set criteria for evaluation. Students, with the aid of the instructor, then plan objectives for answering the above questions, create contracts indicating what tasks are to be completed, and devise criteria for evaluating the results. The class may want to follow the guidelines for "Self-directed, first step" (Treffinger, Appendix B).

During this week students are encouraged to investigate textbooks on reading and study skills, to consult other teachers to obtain hints that will help in their specific classes, and to ask students. They also complete an evaluation form on their own study habits, such as the one created by Preston and Botel, "How I Study" (Appendix D).

Hopefully in their discovery, the students will discover the SQ3R Study Method of a textbook. The teacher then suggests that students practice this

method of study for their project next week.

Weeks 3 and 4

Students are asked to complete an independent study project in which they practice the steps of the SQ3R study method. Referring again to Treffinger's "Basic Model of Instruction" (Appendix B), students and teacher follow "Self-directed, second step" guidelines in planning the learning activities.

The activities can be any topic the student chooses as long as reading is a major tool for learning. Students will need assistance in limiting their topic to one which can be easily handled in this time span.

Weeks 5 and 6

"Self-directed, third step" of Treffinger's model (Appendix B) is followed as students take control of their plans for their next project. Since the student is in control, the projects can be focusing on reading skill and study skill improvement specifically,or can be a research project, or can be independent reading selections.

The general questions guiding the students from now on are the following:

1.) How do I want to improve in reading?
2.) How do I want to improve in study skills?
3.) What do I want to learn more about?

Reading skills and study skills are incorporated into each project. For instance, a student interested in studying BURY MY HEART AT WOUNDED KNEE can also decide to improve his/her rate by using the shadowscope while reading the book, can practice a particular study skill such as outlining, and can develop his/her own vocabulary list.

At this point some students still need assistance in self-direction. The reading teacher should not be afraid to have the student determine what point s/he is at and work at that level until the student gains confidence to proceed to the next level. Thus, not all students will be independent learners in six weeks. All the stages may be mastered in the semester or may

not be. The important aspect is that students develop in the stages to some degree, learn to appreciate reading as a learning tool, and improve their reading and study skills.

SUMMARY AND CONCLUSIONS

Fifteen students began the reading lab sessions in January and continued five days a week until the end of May. Some students elected to take the course, while others were required to take the course based on past histories of reading difficulties. This was not a Title I Reading Program. The lab was adaptive to remedial and/or developmental needs.

The Stanford Diagnostic Reading Test - form B was administered for diagnosis of reading problems. Students also completed a survey on their reading and study habits and discussed their habits in both areas with their peers.

The objectives of the course were the following:

1.) To improve reading skills.
2.) To improve study skills.
3.) To acquire stages of self-direction in learning in the areas of setting objectives, assessing behavior, determining methods of instruction, and self-evaluating.
4.) To improve attitudes toward reading.

The initial six-weeks training concentrated on improving study skills and developing stages of self-direction while students chose independent projects to work on. Students chose to read to learn about a specific topic, to read from the college-bound reading lists, or to read for pleasure. Those projects based on selection of literature included a follow-up study on a topic related to the literature. For instance, one girl chose to read Eric, a book about a boy who died from cancer. She then proceeded to study the illness, cancer.

Students were taught to write objectives, to look at their learning and reading needs and to create contracts. They were assisted by the instructor

in setting up criteria for evaluation. (See Treffinger's "Model of Instruction," Appendix B.)

Many of the students had very little difficulty adjusting to the freedom of choosing study projects and reading selections. Several commented that they enjoyed the freedom and wished they had it in other courses. Several students had achieved stages of self-direction prior to entering class, while others had little or none at all.

Treffinger's "Model of Instruction" (Appendix B) was very useful. All but two students achieved to step 2, which was "Teacher involves pupil in creating options" under the Goals and Objectives portion of the model. Several were able to create their own objectives.

The students who were recognized as developmental readers could handle step 2, "Teacher and learner use diagnostic conference, tests employed individually if needed" under the section of the model on Assessing Behavior. However, independent diagnosis was not achieved partially due to lack of experience in diagnosis and the short time of one semester to develop all the areas of independence. The remedial students had some input into diagnosing the skills they needed to improve, but those students looked to the teacher for specific activities to use in developing those skills.

Part III of Treffinger's model, Instructional Procedures, was the easiest to achieve independence. Students willingly followed contracts and drew up their own contracts once they had their initial experience of writing a contract. The students had little difficulty defining their projects and activities. Many of the students chose skill development objectives when they independently worked out their contracts. In the past students normally balked at workbook activities to develop skills. However, motivation increased this semester when students freely chose the workbook activities for themselves. Studying word parts from Latin and Greek roots, increasing rate, skimming and

scanning exercises, and finding main ideas were some of the skills selected.

Assessing Performance, Part IV of Treffinger's model, was the hardest stage of independence to achieve. Most of the students conferred with the teacher to determine the criteria for evaluation. None really achieved independence in self-evaluation. Again time was a factor in developing this area. Also students varied in what was A work to them. Some would settle for less than what peers felt was worthy, while others set higher goals for less reward.

If this teacher had to determine which area of the overall objectives was most improved, it was attitude toward reading. In final evaluations almost all students commented on their improvement in attitude. Some of the comments included:

> "...I found when my speed increased, so did my interest in what I was reading because I could get more information quicker." (Matt Wilson)
>
> "In the class I have read more books than normally and get more interested in them." (Brett Petersen)
>
> "This class has also made me put my mind into reading more books." (Glenda Blower)
>
> "I am not hung up with how fast everyone else is reading, how much faster than I because I have found confidence in my reading and vocabulary." (Keith Baxter)

Study skills also improved for many. One boy was amazed at how helpful the SQ3R Study Method was and began using it in all of his classes. One girl wrote, "When I'm reading to learn about something, I don't drift off and think of something else." She learned to focus her reading on specific questions set up in her preview. The most useful study skill in which all students improved was the ability to develop questions to focus study and reading. This skill was used in reading to learn and in developing projects and contracts.

The Stanford Diagnostic Reading Test - form A was administered at the end of the semester. At that time the students were categorized into two groups:

seven students who demonstrated real growth in independence as judged by the instructor and eight students who demonstrated little or no growth in independence--primarily due to previously developed levels of independence. No significant differences were found between the average scores of the students in these two groups on the posttest. Students who came into class with a high degree of independence adapted well to the individualized freedom. They knew basically what they wanted to achieve, set their goals, and achieved them. The students who demonstrated growth in independence while taking reading lab started out with having to have the teacher's approval before they were confident to plan. At the end of the semester they were capable of planning their own objectives, contracts, and some criteria for evaluation.

The small group sizes and subjective method of assigning students to groups indicated that a formal statistical comparison was inappropriate. Nevertheless, it may be noted that the students who were viewed as gaining independence during the semester did as well or better in reading improvement as those students who were viewed as showing no real gain in independence.

Experiences with these students indicated that self-direction in learning could be taught while reading skills were being developed. This instructor believes that all classroom teachers can develop study skills aiming toward independence as well as teaching content material. The boy who showed the most growth in independence in learning was hesitant of making his own decisions, confused as to what to do, asked for teacher-approval constantly. By the end of the semester he was able to set up objectives, projects, and criteria for evaluation with minimal teacher approval. He also improved his reading skills greatly. Several other students made similar growth in independence and development of reading skills.

Did student-direction in learning have more effect on developing reading skills than teacher-direction? This author observed no real difference in

overall reading improvement under this program as when in previous semesters teacher-directed activities were used. However, through observations, attitude toward reading for pleasure and knowledge seemed more positive during this semester than previously. The students also seemed to have a more positive attitude toward the reading lab because of their freedom to select their projects. Motivation was less difficult this semester because of the students' self-selection and planning.

Certain factors in this study tended to limit its value as a source of information concerning training in independence. The instructor needed more time to investigate resources available outside the school building. Last summer was spent developing the strategies to use in the reading lab. Additional activities which would enhance the program would be identification of community resources and communication with fellow teachers in ways they could assist students in pursuing projects related to other courses.

Also, the training period of six-weeks was a limiting factor. The entire semester was needed by most students to develop confidence and ability to achieve Treffinger's stages of self-direction. A reading lab experience extending over an entire year in which the second semester focused on students' complete control of their experiences would seem to provide more opportunity for development of independence. As mentioned before diagnosis and evaluation procedures were new to the students and further training was needed in these areas.

Another limitation was that independence in learning received less emphasis than reading improvement in some situations as the instructor became concerned with her prescriptions of students' needs. A specific student's diagnostic test showed he needed to work on his rate, although he initially refused to do so. The instructor required him to use the ORA Reading Program with the Tachomatic-500 rate machine produced by Psychotechnics. Although the student believed the program would not work, he proceeded to complete the program in three weeks.

His independent rate increased 100 words per minute. As he put it, he was flabbergasted. Other instances of teacher intervention to assist students in a more structured approach occurred. For example, one student was continuously distracting others. He was repeatedly directed to follow his contract. Another student was concerned about passing the course so he could graduate, but did not do more than he had to do and had no interest in contracts. Although he could have greatly benefited from this program, his attitude and motivation levels were too low as he looked forward to the conclusion of his formal education. Specific activities were assigned for him to complete.

The more important limitations were determining growth in self-direction in learning and factors affecting that growth. No instrument had been developed to measure growth in independence in learning. The relationship between growth in independence and maturation, family background and past educational experiences were difficult to identify. For instance, how many decision-making experiences had the students had in the past? Also the influence of creativity on the students' abilities to be self-directed learners was unknown. Would a more creative student achieve independence easier? The relationship between intelligence and the growth in independence should also be examined. Was intelligence a factor in achievement of independent learning skills?

The use of testing instruments to measure independence in learning, attitudes toward reading and learning, and learning skill improvement would be useful to analyze results formally. As resources, materials, and time to develop the program to its fullest accumulate, this instructor feels the program will be even better in offering successful educational experiences for the students.

The purpose of this project was to develop strategies to develop self-direction in learning in the reading lab. Despite the limitations mentioned

above, this goal was accomplished and the strategies were useful. The students were receptive, and reading improvement did not suffer. This experience has provided evidence that the goal of all educators should be to develop self-direction in learning so that graduates will be more able to pursue independent learning in their adult lives.

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Appendix A

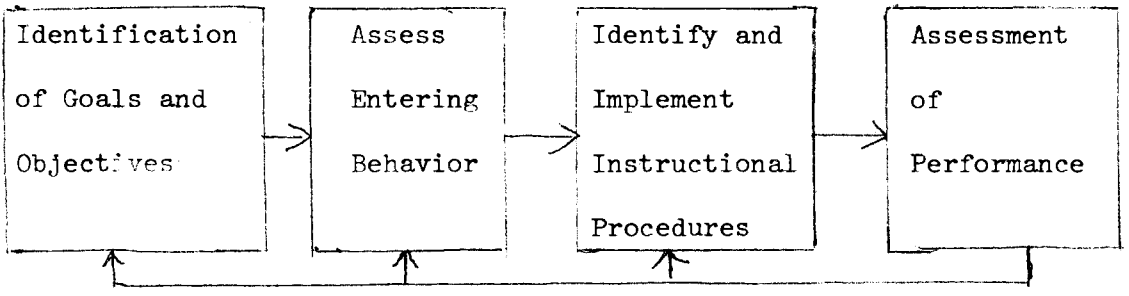
(Gibbons, Maurice and Gary Phillips. "Helping Students Through the Self-Education Crisis." Phi Delta Kappan. 60:298-299. December, 1978.)

Teaching Activities	Learning Activities
Decision	
• Help students visualize the experience of being an S-D learner. Model S-D learning.	• Students compile a list of famous and local S-D learners (including graduates of S-D classes), then list the personality characteristics, ways of learning, and skills most common among them. From these lists they produce a profile of the S-D learning process and of a successful S-D learner.
• Teach students to value S-D learning (teacher must value S-D learning and communicate that the fact without ambiguity).	• Students describe how they would like to be different at the end of one year or one semester. They list behaviors that would show progress in this direction. They record any signs of these behaviors.
• Help each student create a self-fulfilling prophecy of success as an S-D learner. During interviews, conversations, planning sessions, and progress reviews, reinforce that prophecy. Enlist the aid of parents.	• Students assess their rate of progress toward the profile of an S-D learner and their personal list of desired behaviors. They evaluate their performance of such S-D skills as time management.
Initial Ecstasy	
• Organize a process, such as contracting, to structure time and effort. Set expectations and limits. Help students to explore alternative activities.	• Student self-assessment: diagnosis of the skills necessary for successful S-D performance and identification of the competency-based instruction the students need to correct shortcomings.
• Teach the new skills students require, such as goal setting, time management, and resource identification.	• Students simulate and role play activities they are about to experience in reality, such as approaching an adult to arrange a work experience.
• Establish one-to-one conferences to discuss the individual's learning style and learning tasks.	• Students begin writing contracts and practicing skills. They also explore the alternatives in the program.
•Inform parents of the S-D process. Secure their commitment to support students during the transition crisis.	• Students begin to study the group interaction process.
Shock of Recognition	
• Clarify new teacher and student roles: "This you can expect from me; this I expect from you."	• Small groups form for discussion of emerging difficulties and to confirm that the student is not the only one who is struggling.
• Discuss purpose and direction with students, provide a general program structure, examine this shock stage and optional routes out of it. Help but do not rescue: "I refuse to do for you what you can do for yourself."	• Launch small-group projects to allow for modeling leadership in S-D activities by some students and to permit less challenging roles by others who must test their initiative gradually.
• Renegotiate learning contracts, setting more realistic goals and deadlines.	• Combine activities for personal development with activities for development of intellectual and procedural skills. Example: Lead a team conducting a survey of community opinion on an important issue.
• Reinforce any sign of success; help students to identify with exemplars and to build a self-fulfilling prophecy of success. Model respect for S-D learning and encourage respect among the students.	•Begin preparation for introductory challenge experiences in home and community settings.
	• Students overcome apathy by completing a task successfully. (Teachers help them to finish any task by any means.)
Crisis	
• Permit time for solitude, reflection on personal difficulties with tasks, and acceptance of responsibility for them.	• Students conduct individual and group force-field analysis: "What are the payoffs, what are the constraints involved in this activity?"
• Help students to identify their best ideas and become confident of their ability to accomplish them. Prepare to get started.	• Students conduct trial challenge activities, report their experiences to the group, and discuss their struggles and successes.
• Help the student to win the end product of his effort. He must anticipate pride in the result in order to weather the frustrations of the crisis.	• Students break their next activity into a series of sub-goals with a time sequence so they can say, "The first step is. . . , which I will finish by . . . ."
Realism	
• Help students process their feelings and behavior during previous stages in order to maximize learning from success and failure.	• Members of the peer group process each other's feelings, experiences, and acceptance of responsibility. Teacher models but does not pressure.
• Make opportunities for student reports about their activities and demonstrations of their accomplishments. Reward them for their efforts and for their honesty in personal comments, public statements, and reports to parents.	• Students rate themselves on scales of time management, organization, accomplishment, and resource identification.
• Model optimism and risk taking. Reaffirm the value of challenge, struggle, and personal growth.	• Students select and declare real-life challenge activities in the community: adventure, service, creative expression, logical inquiry, practical application, academic concentration, work experience, and resolution of an interpersonal problem or conflict.
	• Regular practice of skills necessary for success in more complex challenge experiences (formulate as competencies with specific levels of required progress).
Commitment	
• Secure written commitment in detailed learning contract and public commitment in peer group and in adult support group.	• Students launch challenge experiences, reaching out farther from the security of home base and farther from familiar people and activities. They begin experiences with competent adults in the world of work.
• Conduct individual conferences to establish pattern of self-evaluation (e.g., "Give your own grade and defend it."), to intensify internal rewards (e.g., "What values are you experiencing from your accomplishment?"), and to deal with the future (e.g., "How much is enough? Where is this leading? Is this activity the right one for me?").	• Peer groups discuss behavioral changes achieved and successes accomplished by each individual. Students gain reinforcement by tutoring peers and presenting completed projects as tangible evidence of success.
Achievement	
• Increase freedom and responsibility of student. Implement self-evaluation and reporting.	• Students demonstrate their accomplishments in the challenge areas to a gathering of peers and teachers. This is followed by self-evaluation sessions with their individual planning groups.
• Encourage greater risks by setting greater challenges in all areas.	• Students continue to discuss ideas, problems, and accomplishments with their peers, but now progress to an ambitious group challenge project.
• Model risk taking. Announce a challenge and set the date by which all participants will share their accomplishments.	• Competency-based instruction, peer tutoring, and presentation of completed projects continue. Students are introduced to the pursuit of in-depth mastery in one area.
Plateau	
• Refuse to accept repetition of safe, comfortable challenge activities. Raise the level of competence required.	• Students pursue a variety of new experiences in order to extend the catalogue of possible activities from which they may choose. High-interest areas are identified.

Appendix B

BASIC MODEL OF INSTRUCTION

(Donald J. Treffinger, "Teaching for Self-Directed Learning: A Priority for the Gifted and Talented," GIFTED CHILD QUARTERLY. 19:52, 1975.)



("Assess entering behavior" means adjusting plans for learner who has mastered objective already, has attained or lacks prerequisite skills, or has particular needs, characteristics, or motives which may influence instruction.)

MOVING TOWARD SELF-DIRECTED LEARNING

GOALS AND OBJECTIVES

Teacher-directed: Teacher prescribes for class or for pupils.
Self-directed, 1st step: Teacher provides choices or options for pupils.
Self-directed, 2nd step: Teacher involves pupil in creating options.
Self-directed, 3rd step: Learner controls choices, teacher provides resources and materials.

ASSESS ENTERING BEHAVIOR

Teacher-directed: Teacher tests and makes specific prescription.
Self-directed, 1st step: Teacher diagnoses, provides several options.
Self-directed, 2nd step: Teacher and learner use diagnostic conference, tests employed individually if needed.
Self-directed, 3rd step: Learner controls diagnosis, consults teacher for assistance when unclear about needs.

INSTRUCTIONAL PROCEDURES

Teacher-directed: Teacher presents content, provides exercises and activities, arranges and supervises practice.
Self-directed, 1st step: Teacher provides options for learners to employ independently, with learner's own pace.
Self-directed, 2nd step: Teacher provides resources and options, uses student contracts which involve learner in scope, sequence, and pace decision.
Self-directed, 3rd step: Learner defines projects, activities, etc.

MOVING TOWARD SELF-DIRECTED LEARNING - p. 2 (Appendix B continued)

ASSESS PERFORMANCE

Teacher-directed: Teacher implements evaluation and gives grades.
Self-directed, 1st step: Teacher relates evaluation to objectives, gives student opportunity to react or respond.
Self-directed, 2nd step: Peer-partners used in providing feedback; teacher-student conferences for evaluation.
Self-directed, 3rd step: Student self-evaluation.

Appendix C

THE "AFFECTIVE COMPONENT" OF THE READING PROGRAM

(Darryl J. Strickler. Article found in CONTEMPORARY EDUCATION. 48:161-164, Spring, 1977.)

OBJECTIVES for the affective component of the reading program:

1.0 AWARENESS. The student will be aware of the various purposes which reading can serve. He will:
- 1.1 be aware of the information gathering potential of reading.
- 1.2 be aware of the enjoyment which can be derived through the reading of literature.
- 1.3 be aware of the opportunities for personal growth which reading provides.

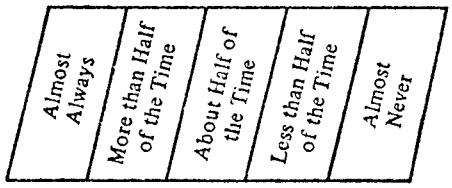
2.0 INTEREST. The student will demonstrate an active interest in reading as an information gathering process and as a source of enjoyment and self-fulfillment. He will:
- 2.1 consider using books and other printed media as a source of information.
- 2.2 actively attend to, and derive enjoyment from, literature being read to or by him.
- 2.3 actively seek out and examine books and other printed matter to explore their potential for fulfillment of personal needs.

3.0 ATTITUDE. The student will demonstrate a positive attitude toward reading and reading instruction. He will:
- 3.1 frequently engage in recreational reading when faced with a number of equally attractive alternatives for use of leisure time.
- 3.2 frequently use reading as a means of gathering information, deriving knowledge, and seeking understanding.
- 3.3 actively participate in learning activities designed to increase his reading skill.

4.0 VALUE. The student will incorporate reading into his personal value system. He will:
- 4.1 develop his own purposes for reading in relation to his personal value system.
- 4.2 identify and read specific literature which is related to his personal value system.
- 4.3 effectively use various resources to locate literature and other printed media related to his enjoyment and information needs.

Appendix D

(Preston, Ralph C. and Morten Botel. How to Study. Chicago, Illinois: Science Research Associates, Inc., 1974. p. 4-8.)



Previewing

1. Do you read over the table of contents of a book before you begin studying the book?
2. Before studying an assignment in detail, do you make use of any of the clues in the book such as headings, illustrations, and chapter summaries?

Reading

3. Do you try to get the meaning of important new words?
4. As you read an assignment, do you have in mind questions that you are actually trying to answer?
*5. Do you look for the main ideas in what you read?
6. Are you able to read without saying each word to yourself?
7. In addition to reading the required textbooks, do you read other materials for your courses?

Notetaking While Reading

8. As you read your assignments, do you take notes?
9. Do you review your notes soon after taking them?

Appendix D continued

	Almost Always	More than Half of the Time	About Half of the Time	Less than Half of the Time	Almost Never
Remembering					
10. Do you try to find a genuine interest in the subjects you study?					
*11. Do you try to understand thoroughly all material that you should remember?					
12. When studying material to be remembered, do you try to summarize it to yourself?					
13. Do you distribute the study of a lengthy assignment over several study sessions?					
14. Do you try to relate what you are learning in one subject to what you learn in others?					
Report Writing					
15. Before writing a report, do you collect information by doing research in the library?					
16. Before writing a report, do you make an outline?					
17. In writing a report, do you clearly indicate the main idea of each paragraph?					
18. In writing a report, do you rewrite your first drafts?					
Listening and Taking Class Notes					
19. During class, do you search for main ideas?					
*20. In class, do you take notes?					
21. Do you revise class notes soon after class?					

Appendix D continued

	Almost Always	More than Half of the Time	About Half of the Time	Less than Half of the Time	Almost Never
Preparing for Examinations					
*22. Before an examination, do you review the important facts and principles?					
23. Do you combine important notes on your textbook and from class into a master outline in studying for a major examination?					
24. Do you make up examination questions that you think will be asked, and answer them?					
25. In studying for an examination, do you distribute your time over at least two sessions?					
Taking Examinations					
*26. In taking examinations, do you read the directions and the questions with care?					
27. At the start of an examination, do you make plans for suitably distributing your time among the questions?					
28. In taking an essay examination, do you outline your answer to a question before you start answering it?					
29. At the end of an examination, do you proofread or check your answers?					
Planning Time					
*30. Do you keep up to date in your assignments?					
31. Do you have a study-schedule plan in which you set aside time each day for studying?					
32. Do you divide your study time among the various subjects to be studied?					

Appendix D continued

	Almost Always	More than Half of the Time	About Half of the Time	Less than Half of the Time	Almost Never
Arranging Physical Setting					
33. Is the space on your study desk or table large enough?					
34. Is your study desk or table kept neat, that is, free of distracting objects?					
*35. Do you study in a quiet place—one that is free from noisy disturbances?					
36. Do you study by yourself rather than with others?					
37. When you sit down to study, do you have the equipment and materials you need?					

Which questions did you answer "almost always" or "more than half of the time"? They represent your strong points as a student. Write down their numbers.

_____

_____

_____

Which ones did you mark "less than half the time" or "almost never"? Write down their numbers.

_____

_____

_____

Appendix D continued

These are your weak points.

Now look back at the questions represented by these numbers on the checklist to see which you believe to be your three greatest assets and which your three greatest weaknesses. Name them briefly.

Greatest assets:

1. _____

2. _____

3. _____

Greatest weaknesses:

1. _____

2. _____

3. _____

Now look at those questions in the checklist that are starred (5, 11, 20, 22, 26, 30, and 35). These questions are about practices that the best students in three colleges thought especially important. Which of these seven questions did you answer "almost always" or "about half" or "more than half of the time"?

_____

Continue these good practices. At the same time, while you are going through this book, give special attention to the suggestions dealing with the study habits in which you are weakest. Try to strengthen them.