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ABSTRACT

Career education is a vehicle which can capitalize on the interests of learning disabled students and, at the same time, show the relevance of academic skills. Project SELECT (Special Education Learning Experiences for Career Training), funded by the Elementary and Secondary Education Act, Title III, was implemented in order to develop a curriculum in career education to increase sixth, seventh, and eighth-grade students' skills in reading and arithmetic, as well as to improve knowledge of job opportunities. The first year's goal was to produce and utilize ten career kits consisting of film-strips, puzzles and games associated with auto mechanics, health services, cosmetology, public utilities, food services, truck driving, law enforcement, business careers, military service, and an introductory career awareness kit. To create materials such as these, the most important ingredient is a willingness to capitalize on interests already manifested by students. (KS)

CAREER EDUCATION:

GATEWAY TO BETTER READING

Project SELECT
Brown Deer Middle School
Brown Deer, Wisconsin

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Narrative accompanying slide presentation delivered at the annual meeting of the International Reading Association, Anaheim, California, May 1976.

Preparing students to move from the classroom to the "real world" -- isn't that the ultimate objective of every teacher? But what will be the world of students with severe reading problems? What doors will open for reading-disabled students? Will poor readers be able to compensate for their handicap, or will they be relegated to only those jobs which make few reading demands?

Although the answers to these questions lie within the individual personality of each child, the school can do much to create a climate within which it is more acceptable to have learning problems. In fact, schools could take a lesson from city governments which are doing more to adjust their environments to the needs of the physically handicapped.

It has been conservatively estimated by the U.S. Office of Education that, in any given classroom of heterogeneously-grouped children, up to three percent of the students have learning disabilities. These students are of average or above-average intelligence, and are usually not immediately identifiable. However, some learning disabled students are hyperkinetic; others exhibit emotional disorders, sometimes a result of continued academic frustration and failure.

But an alert classroom teacher can often pick out the child with learning disabilities, based on the kind of work he does at school. For instance, L.D. children (and adults, as well) are notorious for their poor handwriting and spelling. Contrary to the thinking of the past, these inadequacies do not usually constitute the students' problems per se, but are merely symptomatic of the real problems: disorders in the areas of receiving information, processing it into a meaningful form, and/or transmitting ideas -- all activities that are vital to learning, uder teaching methods traditionally employed in the classroom.

In Brown Deer, Wisconsin, a project was begun in 1973, funded by the Elementary and Secondary Education Act, Title III. Twelve learning disabled students were identified initially as participants in Project SELECT -- an acronym for "Special Education Learning Experiences for Career Training."

The project is being conducted at Brown Deer Middle School, for sixth, seventh and eighth-grade students. The goal of the project is to develop a curriculum in career education which will also increase students' skills in reading and arithmetic.

In order to achieve these objectives, we decided to emphasize varied approaches to learning, using a wide selection of media. Our premise was that many of these middle school students had already been "turned off" by a succession of negative experiences at school. So we tried to start the pendulum swinging in the other direction, by making the learning process as rewarding and satisfying as possible.

As Artley and Hardin pointed out in January's issue of The Reading Teacher, "The fact of the matter is that it is extremely difficult to differentiate clearly and definitely between a child who would be labeled a disabled reader and one who would be a disabled learner." They go on to say that, in terms of sheer logic, one might say that any child who is having difficulty in learning to read is having a learning problem.[1] For this reason it is believed that the materials which were developed by Project SELECT for students with learning disabilities would have equal value for teachers of reading disabled students.

Staffing for the project brought together three individuals with varied backgrounds and expertise. The Project SELECT team consisted of an LD teacher, an instructional media specialist, and a production technician. In addition, a professor of special education at the University of Wisconsin-Milwaukee served as a consultant,

meeting with the team regularly to critique the learning materials as they were developed.

One of the first tasks was to examine bibliographies, publishers' catalogs, and professional journals in order to survey the commercial materials available to provide career education. We soon discovered that, although quantities of career education materials are on the market, only a small fraction is suitable for the needs of middle school students with low-level reading achievement. Therefore, we decided to purchase from the commercial sources as many audiovisual materials as we could find that would be appropriate, and to design and produce the remainder in our classroom.

In addition, it was necessary to consult with the students' regular classroom teachers. The students are mainstreamed with their peers for the majority of the day, and come to the L.D. special resource room for only one period.

After obtaining input from the classroom teachers, we decided to develop self-contained career kits, each to include a variety of learning experiences related to a specific occupation or cluster of occupations. Students were surveyed to find out which careers held the most interest for them, and their choices were given high priority in determining the focus of the kits.

The first one we developed was an introductory Career Awareness Kit. Included in this kit were filmstrips, games (both commercially and locally produced) and a few pencil-and-paper activities. The materials encouraged students to think about the idea of choosing a satisfying career, to evaluate their own interests and abilities, and to relate the subjects studied at school to future requirements in the world of work.

Each kit has a student's guide, which is always in a blue folder and directs him through the sequenced activities of the career kit. There is also a teacher's guide, which contains an explanation of the activities, concepts to be learned, the objectives for the kit, and the answer key.

To give you a better idea of the kinds of activities in a career kit, let's examine more carefully the contents of the Auto Mechanics Kit. This occupation was selected because of its appeal to the boys in our program. And boys predominate in L.D. classes as they do in the remedial reading population.

The first activity for the student is to assemble a puzzle of an early Cadillac,[2] a visual perception activity. L.D. students often have difficulty with closure, the ability to recognize how parts fit together into a whole. It is understandable, then, that this deficit would affect their ability to identify words easily. Another commercial product now available is a series called "Car Match-ups."[3]

The student then views a sound filmstrip that describes the automobile mechanic's job.[4] Incidentally, we have found that an automatic filmstrip viewer such as this is most effective.[5] It eliminates the distraction of listening for a signal to advance the filmstrip manually.

The next activity is to play a game called "Auto Phonics," a game similar to bingo but using automobile-related words to develop word-attack skills.[6]

The student then reads a book which describes and illustrates possible careers in the field of auto sales and service.[7] We narrated the book so that it would be available on cassette tape.

A recent doctoral dissertation, reported by Elkind in Today's Education, supports the position that "satisfaction in reading often derives from the degree of fit between the material being read and the conceptual level of the reader." [8] It follows, then, that a student who is interested in auto mechanics is likely to have a more satisfying experience in reading such material that is of interest to him. In fact, Elkind suggests that many so-called "slow readers" have problems with receptive discipline (i.e., attending to presentations of others) and not with inadequate speed of reading.

Since knowledge of tools is important to an auto mechanic, we produced a group of study prints, showing the various kinds of equipment that he might use. The descriptive material is narrated on cassette tape.

After students feel that they are familiar with the tools pictured in the study prints, they have an opportunity to test their knowledge by playing a game called "Tool Duel." This card game, on the order of "old maid," provides an opportunity to reinforce sight words of high interest to the students. The lone card which all players try to avoid is one spotted with grimy fingerprints, entitled "The Greasy Rag."

Next the student works a crossword puzzle, examines study prints describing the internal workings of an automobile, searches for mechanic-related words in a word-hunt, and follows directions for "gapping" the spark plugs included in the kit.

Arithmetic skills are needed to figure out the cost of gas at various prices in another exercise. A commercially-produced device called "Auto Math" calls for similar computations.[9]

The next activity is listening to a cassette called "Mystery Sounds," requiring auditory discrimination to identify common noises associated with an automobile. (We ponder the significance of students who can distinguish subtle differences in engine noises but have difficulty distinguishing the sound of an "f" from that of a "th.")

Then the student assembles a model car. This snap-together model which can be used repeatedly was manufactured by Tonka Toys. [10] We find the activity useful for providing a rationale for reading printed instructions. You may, however, need to re-write the instructions at a reading level more suitable for your students.

Finally, students play a game called "Car Rally." [11] This is a highly enjoyable competition using pictures of car models, and players must employ considerable visual discrimination, as well as think ahead to future moves and develop strategies.

The third career kit that we developed was one on hair-styling. As in the Auto Mechanics Kit, this one incorporates a variety of activities: manipulative, paper-and-pencil, computational, listening, and reading career stories.

The next kit centered on careers in health services. Again, learning games were an important part of the kit. One of the first students who used it was planning strongly on becoming an eye-ear-nose-and-throat specialist. As a result of learning about other possibilities in the area of health occupations, his interest turned to becoming a medical illustrator, a career that would capitalize on his artistic ability.

Many students in the project have shown interest in careers in public utilities. The opportunity to use actual telephone equipment to make connections on a terminal board provided additional practice in auditory discrimination and in following directions. Arithmetic activities consisted of figuring costs for long distance calls, and

we developed a board game to show the diversity of jobs available within the telephone industry.

Careers in food services was an area which enabled us to bring in nutritional concepts. A number of colorful and exciting games are available from such sources as university home economics departments and national baking companies.[12]

We made study prints showing kitchen equipment and utensils, and designed a follow-up card game to reinforce the information conveyed in the study prints. Planning nutritious menus was the goal in one game, which used food models available from the American Dairy Association.[13]

Field trips are also a part of students' learning experiences. To stimulate interest in food service careers, we took a trip to a nearby restaurant. The students seemed to enjoy their look behind-the-scenes, and were surprised to learn that the manager of this local restaurant chain had first started in the business as a busboy when he was about their age.

When a number of students expressed interest in the Military Kit, we decided to visit the Great Lakes Naval Training Station. Such visits serve the dual purpose of expanding students' horizons and providing the content for subsequent experience stories.

If any of your students are camera buffs, they will be delighted to do the photographic honors during on-site career explorations, and you can later ask them to write a narrative to accompany the pictures they have taken. You could also encourage them to tape-record the narrative so that future classes can also profit from the visit. Your school librarian would probably be pleased to include such material in the career resource file in the EMC. Through this process, the time-honored experience story is up-dated to the more sophisticated technical abilities of teenagers.

A career in truck driving was the subject of the next kit that was completed. We developed or purchased games and puzzles[14] which helped to increase skills in reading maps and charts. Another game concentrates on spelling terms associated with the trucking industry.

We find that a self-teaching device called a Kwiz-Whiz is useful in demonstrating various kinds of highway signs.[15] This device is very versatile since the teacher determines what is to be put on each sheet. We found that laminating the sheets with plastic film helps to make them more durable.

Our goal during the first year of the project was to complete ten career kits. These focused on auto mechanics, health services, cosmetology, public utilities, food services, truck driving, law enforcement, business careers, careers in the military, and the introductory Career Awareness Kit.

During the second year of the project ten additional kits were developed in the areas of carpentry, plumbing, data processing, and so forth. Since boys do predominate in our school's L.D. program, many of the kits have a masculine emphasis, although we try to stress opportunities for women in all occupations.

During this final year of the project we have been field-testing the career kits in L.D. classes in ten different school districts in the greater metropolitan Milwaukee area. As a part of the formal evaluation, we are comparing student growth in the areas of reading and arithmetic this year with the progress which they made last year before they were introduced to the kits. Using a pre-post multiple choice test (recorded on cassette tape), we are also trying to determine whether any significant growth in career awareness has taken place as a result of kit useage. Finally,

we have asked each teacher and student to evaluate every kit that they have used. Teachers are asked to provide information about such practical aspects as the number of students with whom it was judged to be effective, the kinds of teaching situations in which it was found valuable, etc. Students were asked to indicate whether they found the activities easy or difficult, interesting or boring, and to tell whether their interest in a particular career has increased since using the kit.

Although no final analysis of the data will be completed until July, an initial inspection of preliminary data by a university evaluator has been encouraging. Both teacher and student ratings of the materials have been high, and the sustained useage of the kits throughtout the year supports the questionnaire results.

We are also conducting a three-year evaluation of students in the Brown Deer L.D. program. In addition to measuring growth in arithmetic and reading skills, we are looking for improved attitudes toward themselves. We are finding that an opportunity to work on tasks at which they can succeed visibly improves students' self-concepts and attitudes toward school in general.

To create materials such as those shown today, the most important ingredient is a willingness to capitalize on interests which students already manifest. In addition, it would be helpful to have available such basic equipment as a dry-mount press for laminating worksheets and making study prints. A tape recorder is needed to narrate captioned filmstrips, study prints, books, and stories. A primary typewriter is desirable to make worksheets and games. Other odds and ends such as spinners, markers, blank cards, and so forth are available commercially at reasonable prices.[16]

Lettering tools and rub-on letters called "Lettra-set" will give a professional-looking finish to the games that are produced in the classroom.[17] Numerous books are on the market to suggest games and learning activities that you can adapt to the special needs of the reading disabled students in <u>your</u> school.[18]

What to do about older students with reading disabilities? Well, we have found that career education is a vehicle which can capitalize on their interests and, at the same time, show the relevance of academic skills. You may want to try this approach with <u>your</u> students.

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