R E P O R T R E S U M E S

ED 015 967 UD 004 382

THESE THINGS HAVE WORKED--MATERIALS DRAWN FROM THE EXPERIENCE OF UPWARD BOUND PROJECTS, 1966-1967.

EDUCATIONAL PROJECTS INC., WASHINGTON, D.C.

PUB DATE 67

EDRS PRICE MF-$0.25 HC-$2.12 51P.

DESCRIPTORS- *IMPROVEMENT PROGRAMS, *HIGH SCHOOL STUDENTS, *DISADVANTAGED YOUTH, *PROGRAM DESCRIPTIONS, COLLEGES, UNIVERSITIES, LANGUAGE ARTS, COMMUNICATION SKILLS, MATHEMATICS INSTRUCTION, SOCIAL STUDIES, SOCIAL PROBLEMS, INSTRUCTIONAL MATERIALS, CURRICULUM, UPWARD BOUND

THIS DESCRIPTION OF THE EXPERIENCES OF SUCCESSFUL UPWARD BOUND PROJECTS FOR DISADVANTAGED HIGH SCHOOL STUDENTS IS COMPILED FROM THE REPORTS OF THE COLLEGES AND UNIVERSITIES WHO CONDUCTED THESE PROJECTS. MOST OF THE INSTITUTIONS COMMENT ON THEIR LANGUAGE ARTS, MATHEMATICS AND MONEY MANAGEMENT, AND COMMUNICATION SKILLS PROJECTS, AND A FEW DESCRIBE THEIR HANDLING OF SOCIAL STUDIES INSTRUCTION AND SOCIAL ISSUES. THERE ARE A FEW REPORTS ON PROGRAMS IN THE SCIENCES. IN MANY INSTANCES A REPORT OF A PROJECT OUTLINES ITS GOALS AND PROCEDURES AND LISTS AND DESCRIBES THE MATERIALS IT USED. (NH)

THESE THINGS HAVE WORKED

Materials Drawn from the Experience of
UPWARD BOUND Projects

1966-1967

EDUCATIONAL PROJECTS, INCORPORATED

Consultants to the Office of Economic Opportunity for UPWARD BOUND

1717 MASSACHUSETTS AVENUE, N.W. / WASHINGTON, D. C. 20036

"We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development."

-- Jerome Bruner: The Process of Education

* * * * *

"Communication is a funny business. There isn't as much of it going on as most people think. Many feel that it consists in saying things in the presence of others. Not so. It consists not in saying things but in having things heard. Beautiful English speeches delivered to monolingual Arabs are not beautiful speeches. You have to speak the language of the audience -- of the whom in the 'who-says-what-to-whom' communications diagram. Sometimes the language is lexical (Chinese, Japanese, Portuguese), sometimes it is regional or personal (125th Street-ese, Holden Caulfield-ese, anybody-ese). It has little to do with words and much to do with understanding the audience, of the 'whom'."

-- John M. Culkin, S.J.: "A Schoolman's Guide to Marshall McLuhan," Saturday Review, March 18, 1967

THESE THINGS HAVE WORKED

In response to a request from Educational Projects, Inc., many of the UPWARD BOUND Projects sent in statements of materials, procedures, etc., which had produced good results in the local situation.

A selection from these responses makes up the following pages. In each case, the Project which was the source of the item is indicated, and a direct contact is suggested when more explanation is desired.

The ERIC Information Retrieval Center on the Disadvantaged at Yeshiva University has prepared descriptive bibliographies of curriculum references in: Language Arts (excluding Reading), Reading, Mathematics and Science, Arts, and Social Studies (including Negro history). One copy of each bibliography may be secured free (other copies 25¢ each) on application to:

Mrs. Effie M. Bynum, Reference Librarian
ERIC Information Retrieval Center on the Disadvantaged
Ferkauf Graduate School, Yeshiva University
55 Fifth Avenue, New York, New York 10003

Each issue of the Idea Exchange contains descriptions of other teaching materials and procedures. Each Project was sent several copies of each issue, and any staff member who does not have one should apply to his Director.

A.

Voluntary speed reading class with some emphasis on improvement of comprehensional skill very successful with the few students who participated. (University of Iowa, Iowa City, Iowa)

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Unit developed on "Tips on Test Taking." (Florida A & M University, Tallahassee, Florida)

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Calligraphy. (Reed College, Portland, Oregon)

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Auto mechanics - taught by UPWARD BOUND student. (Reed College, Portland, Oregon)

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TV communication program. (Ripon College, Ripon, Wisconsin)

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Influencing school system by use of tutor-counselors as teachers' aides in the schools. (University of Minnesota, Minneapolis, Minnesota)

*

Brochure of language tape transcriptions developed with directions for use in studying dialects. Includes listing of renowned stars indicating accent of each. (Florida A & M University, Tallahassee, Florida)

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Use of mobile language laboratory in teaching English as a second language. (Florida A & M University, Tallahassee, Florida)

*

Staff presentation of Shakespearean scene (in costumes) to bring Elizabethean drama to life to students. (Florida A & M University, Tallahassee, Florida)

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Use of Utopian novels and contemporary biographies. (Florida A & M University, Tallahassee, Florida)

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Talking letters (messages taped by students and sent to students in other communities). (Florida A & M University, Tallahassee, Florida)

*

Most reading led to "acting-out:" Camus' The Stranger was read in a jail cell; Shirer's book on the Third Reich led to a mock war-crime trial. (Harvard University, Cambridge, Massachusetts)

*

Drama class began with simple improvisations which teacher felt to be very static and un-free -- imitative of first example, etc. However, improvisations became a mild epidemic in the dormitories at 11 P.M. for several days after. (Stanford University, Palo Alto, California)

*

Reading teachers used games, apologetically or unabashed, but with good success. (Stanford University, Palo Alto, California)

*

Math -- concentrated on logic. Some teachers moved back and forth from English to math in discussion of logic. (Earlham College, Richmond, Indiana; also, University of Illinois, Urbana, Illinois)

*

Recreation -- in particular the UPWARD BOUND football team competing in the city league. (Ripon College, Ripon, Wisconsin)

*

Draw-the-Picture in your head approach to literature. (Luther College, Decorah, Iowa)

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Open-ended essays beginning with "After 2 weeks..., After 4 weeks..."(Luther College, Decorah, Iowa)

*

We offered a Creative Problem Solving course designed to improve problem solving skills. The central skills worked at were those of improving abilities to: (1) think of more solutions to problems, (2) take non-judgemental stances until all the possibilities are considered, (3) think in terms of developing more than one approach to problems, and (4) think of more original solutions to problems. (University of Minnesota, Minneapolis, Minnesota)

*

Projects where students will leave campus (archeological digs, etc.). (University of Minnesota, Minneapolis, Minnesota)

*

English -- recorder was used to record criticism of student papers. Student listened to critique of his work privately. This innovation resulted in much improved work. Students used diary of experiences on trips as basis for English themes. Attendance at plays was experienced for the first time by many. "Penny Vocabulary" was used to stimulate thinking. Very successful. (Central State University, Wilberforce, Ohio)

*

Composition and Psychology in Contemporary Literature. This course seeks to develop and improve communicative skills, while providing an examination of certain psychological ideas crucial in 20th century intellectual life. (Bemidji State College, Bemidji, Minnesota)

*

Introduction to a study of the American city by a comparison of the students' own knowledge of their home cities with the description of them by journalists in newspaper and magazine articles. (University of Iowa, Iowa City, Iowa)

*

Prepared syllabus on "Socialization" and conducted activity on "Who Are You" and "Why Are You What You Are." (Florida A & M University, Tallahassee, Florida)

*

Socio-political dramatizations by students such as mock electoral campaigns, courtroom sessions (using University Moot Courtroom) and international peace conferences. (Florida A & M University, Tallahassee, Florida)

*

Career Unit -- placing students in contact with person(s) in their community engaged in profession of interest to the student. (Florida A & M University, Tallahassee, Florida)

*

A community survey was conducted by the Junior Chamber of Commerce. The UP-WARD BOUND students did the interviewing for this project. (Weber State College, Ogden, Utah)

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*

Psychology of Modern Living included interdisciplinary projects including studies of stereotype behavior, concepts of health and hygiene, use of effective oral and written language. (Northeast Missouri State Teachers College, Kirksville, Missouri)

*

Current World Problems -- for materials we used text books, maps, newspapers and news magazines. The classroom method was team teaching, including such devices as panels, movies, mock Legislative sessions and mock United Nations sessions. We covered such areas as poverty, racial problems and Vietnam. (University of Alaska, College, Alaska)

*

Great issues "course" conducted by tutors. Studied social forces operating in community in small seminar groups - during summer. (Earlham College, Richmond, Indiana)

*

Correlation of the communications areas with a seminar on "decision" to be a core using films such as David and Lisa for a basis of discussion, reading, writing. (College of Saint Teresa, Winona, Minnesota)

*

The "Game Approach" to learning human relations. (Luther College, Decorah, Iowa)

*

The "Who Am I" groups turned out to be one of the more creative aspects of our teaching and instructional method during the summer program. This concept is being expanded in terms of the follow-up program as well as specific changes for the summer program of 1967. (Mount Union College, Alliance, Ohio)

*

City Planning Class planned and built a playground in Trenton. Two classes (Industrial Arts and City Planning) combined on playground. During this the class met with City Planning officials and Anti-Poverty officials in Trenton. (Trenton State College, Trenton, New Jersey)

*

A mock U. N. General Assembly enlisting team teaching of the social science and English departments was held. (West Virginia State College, Institute, West Virginia)

*

Experimental class in electronics involving the constructive destruction of old radios and television sets. (University of Iowa, Iowa City, Iowa)

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Photography class. (University of Iowa, Iowa City, Iowa)

*

The math course was planned around the use of the slide rule. The class took trips about the community using the slide rules to solve math problems encountered. (Colorado Womans College, Denver, Colorado)

*

Our mathematics program included a "casino" approach to teaching probability. The mathematics class actually staged a casino-type recreational event (using "play" money) as an extension of the classroom activities. (Graceland College, Lamoni, Iowa)

*

Mathematical logic class built a small computer (that worked for one happy day) at the end of the course. (Stanford University, Palo Alto, California)

*

Mathematics course based on study of vectors. (College of Saint Teresa, Winona, Minnesota)

*

Chemistry teacher wrote her own syllabus using the experiments which she remembered from her earlier exposure to chemistry which motivated (helped to motivate) her to become a chemist. (Ripon College, Ripon, Wisconsin)

*

After learning of the failures of those math programs which sought to impose an abstract, deductive system on the students, we decided to start the math in the most physical and inductive way we could. This involved the use of dice, playing cards, roulette wheels, field transits, etc. and the making and using of slide rules. This has worked out very well. (University of Notre Dame, DuLac; Notre Dame, Indiana)

*

The teaching of science originating from phases of student interest in natural phenomena and life followed by inductive reasoning from laboratory materials including the use of a telescope and natural surroundings followed by confirmation of thinking through textbook reading which came last rather than first. (West Virginia State College, Institute, West Virginia)

*

Communication in the 20th Century: An Introduction to Electronics and Waves. Each student will make a radio transmitter and receiver among other activities. (Bemidji State College, Bemidji, Minnesota)

*

This summer we hope to have a few projects in which students will leave the campus for a week or on weekends to study archeology by going on digs, biology by camping out at a biological experiment station, mathematics by surveying, geology and geography by cruises down the river -- Mississippi, that is. Hopefully volunteers can do this for us. (University of Minnesota, Minneapolis, Minnesota; also Luther College, Decorah, Iowa; Southern Colorado State College, Pueblo, Colorado)

*

The use of tapes proved especially effective. Students had never been aware of their own voices and speech patterns. (Wisconsin State College, Whitewater, Wisconsin)

*

Role playing rather than traditional classroom procedures and methods seemed to evoke greater responses. (Wisconsin State College, Whitewater, Wisconsin)

*

The Radio Station KOUB was a student-run item which was extremely successful. Several students have earned radio licenses as a result and have applied to colleges to earn speech-radio degrees. (Wisconsin State College, Whitewater, Wisconsin)

*

Rocketry group. An elective interest group in which students combine the theoretical aspects of math and aerospace science to construct scale models of rockets. The students determined apogee and perigee, center of gravity, etc. of their projectiles. This group was so successful that much of our instruction will involve the projects-maintained approach this summer. (State University College at Plattsburgh, New York)

*

Money management through checking accounts at First National Bank of Wheeling. Instruction in the cost of "renting" money at banks vs. "household" loans. (West Liberty State College, West Liberty, West Virginia)

*

Programmed materials: Florida A & M, Tallahassee; University of Guam, Agana, Guam; Arizona Western College, Yuma, Arizona, among others.

*

Film production: Reed College, Portland, Oregon; Bemidji State College, Bemidji, Minnesota, Wooster School, Danbury, Connecticut, among others.

*

Radio: taped radio programs produced by students, taken from class sessions and activities. (Florida A & M University, Tallahassee, Florida)

*

"Film Study in the High School" by one of the leading proponents of the use of film, Father John M. Culkin, S.J., of Fordham University, was originally published in the Catholic High School Quarterly Bulletin. Reprinted as a booklet, it is available for $1.00 a copy from the Fordham Film Study Center, Fordham University, Bronx, New York 10458. In addition to many useful specific suggestions, it has a substantial bibliography.

Father Culkin is also the author of two valuable articles in the Saturday Review: "I Was a Teen-Age Movie Teacher" (SR/July 16, 1966) and "A Schoolman's Guide to Marshall McLuhan" (SR/March 18, 1967).

B.

Improving each student's reading comprehension and speed was the main objective for the developmental reading course. Slide projectors, tachistoscopes, spe ..pressure devices and audio equipment were available; graded reading mat. ..e. s and test books were also used.

Each pupil received a diagnostic evaluation and as clusters of weaknesses were located specific help was given in small group drill. Students observed and measured their own progress in records they kept for themselves. Individual conferences were held with the instructor concerning specific areas of reading - basic skills, speed, vocabulary development, comprehension, associational thinking and the drawing of inferences.

Vital experiences, interests, and problems of each pupil were used as the springboard for selection of materials and a considerable effort was made to promote an interest in books and to encourage the students to read during their free time. (Southern Colorado State College, Pueblo, Colorado)

*

Our English program during the school year centered on a four-play season at Atlanta's Pocket Theater. We scheduled a Saturday afternoon performance of A Doll House, The Glass Menagerie, The Cherry Orchard, and The Skin of Our Teeth. In addition, each student received a copy of the play, the reading of which was the basis of discussion on the morning of the day of the play. In fact, each student ended up with a collection of four Ibsen plays, four by Checkhov, three by Wilder, and a collection of six "modern" plays, or four paperback texts all together.

We arranged for the cast to return to the stage -- which is a three-quarter arrangement -- following each production to talk to the students about the play and the characterizations. These discussions have tended to be vigorous and searching. Some of the students have also seen productions by the Georgia State College Players, including The Man Who Came to Dinner.

We began all this with a full Saturday early in the year devoted to "How to Read a Play," based on an ESI unit of the same name! Here the kids were introduced to the basic conventions and form of written drama, such as dramatis personae and setting, stage directions, and line assignments. They dealt with the problems of scenes set with the actors' words, other expository methods, etc. They read excerpts from Lear, A Raisin in the Sun, Death of a Salesman, Macbeth, Shaw's Caesar and Cleopatra, and both the short story and dramatic versions of "The Monkey's Paw," in order to "get at" these points. (Emory University, Atlanta, Georgia)

*

Our Haiku experience was a function of the morning English classes. The teachers placed pictures from Life all over the rooms, and then, beginning with one-word responses to the pictures, worked toward the rather more formal demands of Haiku. This, and the ensuing desire on the part of some to write

longer stuff, lasted for about three Saturdays. All of the poems were printed in the student newspaper, and a number of them were also printed in a small "sampler" which was distributed at the UPWARD BOUND art exhibit. In addition, we displayed many of the poems and the pictures from which they derived at the exhibit, thus combining the national art show with a good sampling of strictly local products. Eli saw some of the poems and their pictures when he was down here for the sub-regional conference. (Emory University, Atlanta, Georgia)

*

Students in the West Liberty UPWARD BOUND program had an opportunity to familiarize themselves with court room proceedings through a play (The Night of January 16), based on a courtroom trial and actually produced in the local Intermediary Court.

The Court Judge was very cooperative, mingling with the students during rehearsals, explaining from time to time the various workings of the courtroom. He later attended the production and made a brief presentation before the start.

The play itself was very interesting in that it had two endings, the players being prepared for either ending depending on the decision of the jury which was actually taken from the audience (consisting of parents and friends of students participating).

All in all, the experience was wonderful. This was a good example of students learning while participating in something enjoyable to them - not to mention the fact that parents became involved themselves. (West Liberty State College, West Liberty, West Virginia)

*

The Communications Course at West Liberty was based on the concept that a large part of the students' difficulty in writing arose from the fact that they had nothing to say, or that if they did have an idea they did not feel it was of interest or importance to anyone else. The approach we adopted was an attempt to convince them that they had a great number of ideas and that we were interested in hearing them.

We began by using recordings of popular folk songs. After breaking the class into small discussion groups, we would ask for their reactions to the song. We stressed the idea that it was unimportant whether or not they agreed with the instructor's interpretation. We pointed out that there were many different possible interpretations, and that they could actually teach the instructor by showing him ideas that he had missed.

After a few days with folk songs the students were participating very well in the classroom discussions, and we moved on to more difficult recordings, such as poetry and short stories. It was only after several weeks of such oral work that we started written composition. By this point, many of the students realized that they had something to say, and since they realized we were interested in their opinions they were willing to work with us in finding effective methods of presenting their material.

In order not to destroy the degree of confidence they had acquired, we followed the procedure of balancing all corrections on the written paper with appreciative comments about what had been done well. (West Liberty State College, West Liberty, West Virginia)

*

Traditional drama classes allow little room for student creativity in developing new characterizations and plots which might have deep significance for the students. Instead, studying about plays already written forms the basis for most drama classwork.

The UPWARD BOUND creative dramatics class at S.C.S.C. focused on student creativity by encouraging the students to dramatize characters and situations suggested by the class itself; "Murder a Go-Go," an intriguing courtroom drama concerning a teen-age girl accused of murdering her boyfriend, was the result.

In this creative dramatics approach, four steps were followed: (1) selecting the dramatic situation; (2) developing the characters; (3) writing the play; and (4) presenting the play.

1. Selecting the dramatic situation. Members of the class suggested several situations and discussed the possibilities of these situations before deciding on the dramatization of a trial.

2. Developing the characters. Each student picked a particular character he or she would like to portray; several class sessions were spent in improvising the characters' responses and reactions. (Characters included: a judge with an eye for the ladies, a woman lawyer, a prostitute, "Max Hood" - the gang leader, an alcoholic mother, a jealous sister, and a gossipy neighbor.)

3. Writing the play. The class decided on particular incidents and dialogue for the final presentation. They then asked two students who were skilled in writing to prepare the script.

4. Presenting the play. All the traditional aspects of drama were involved here - memorizing, costuming, rehearsing, etc. However, even this phase took on special meaning for the students - involvement in a production which they created seemed to unleash surprising energy and unexpected talents.

An important outcome from this experience was that "Murder a Go-Go" said some revealing things about these kids - about their values, their problems, and their way of looking at the world. (Southern Colorado State College, Pueblo, Colorado)

*

Lesson on Poetry Reading -- The objective of this unit was to encourage poetry reading for enjoyment. An album of poems by Negroes, Singers in the Dusk, was played. The students were given simple teacher-made guide sheets for listening and discussion. The record player was stopped for comments after each poem. Some poems were replayed upon request.

The next day the students brought in poems which they composed with the previous understanding that they would be accepted and read with little analysis or correction. Emphasis was placed on writing poetry just for the sheer joy of it. Some students wrote more than one poem. They read, recorded them on tape, and listened to them. There was background music played on the record player as they recorded.

Their evaluation of this experience was recorded on tape and was highly gratifying.

A slight variation of this approach to poetry, used at Savannah State College, was to allow the students to select their own background music to fit the mood of the poem. (Morris Brown College, Atlanta, Georgia)

*

"Each one teach one" is the theme of the Fort Valley State College project which matches each UPWARD BOUND student to a junior high school student for the purpose of tutoring in English. Based on the beliefs that the UPWARD BOUND students would gain self-confidence and self-respect by assisting others, that teaching is one of the best mechanisms for learning, and that there were at least one-hundred local junior high students who needed tutorial assistance, arrangements were made with the Hunt Junior High School principal for one-hundred of his students -- recommended by their teachers as needing assistance -- to meet at the college for one hour each Saturday. Transportation is usually provided by the tutee's parents, and participation in the project is voluntary. Lesson plans are made up, mimeographed, and distributed to the UPWARD BOUND students by the F.V.S.C. English teachers, who meet with the Junior High English teachers for suggestions. UPWARD BOUND teachers, as well as some other F.V.S.C. teachers, supervise the tutorial hour. Both the college and the Junior High administrators and teachers are enthusiastic about the relationship. A typical comment by an UPWARD BOUND student: "We like to help." (Fort Valley State College, Fort Valley, Georgia)

*

Money and credit was pinpointed as an area for student exploration and involvement. Professor Kenneth Marin, national credit union president, introduced the story of credit unions. He identified well with the group, followed their three-week study, and gave weekly bulletin board spreads of deposits made by UPWARD BOUND students in the credit union, throughout the summer. Students made budgets for themselves and carried on a study of the spending habits of the entire group. They still remark on how very much they learned and how helpful it has been to know about budgeting.

Professor Marin advised the teachers in the use of materials from Personal Finance and other sources. Magazine articles and newspaper items served to bring the class out of the textbook-lock-step procedures. Large sheets of newsprint and crayons were used for the charts, graphs, and tabulated materials. (Aquinas College, Grand Rapids, Michigan)

*

A highly successful method for handling current events quizzes has been to divide the class into teams of five or six members each. Each team then selects a captain and the name of a college it pretends to represent. Following the College Bowl format, the instructor acts as moderator while the tutor keeps score by "college" on the blackboard. Team captains are necessary since often more than one student on a team may speak simultaneously, creating confusion which can only be avoided by having one member whose answer is binding on the team. An anagram or similar puzzle can be used to decide which team gets first chance at answering a question. Then, the teams alternate the first chance at answering questions for the remainder of the game. This pattern is not disrupted by wrong answers. Rather, when an incorrect answer is given, the opposing team is given an opportunity to answer the question and score the points, etc. However, after a correct answer has been given, or the question discarded for lack of a correct answer, the first chance on the next question will follow the predetermined pattern. With careful preparation, it is felt that this method could be generalized and perhaps used in conjunction with the third technique outlined below. (Le Moyne College, Memphis, Tennessee)

*

Other successful sessions, in terms of student enthusiasm, were those based strictly on student participation. In particular, a mock court trial was held in which the class was given a situation involving a moral dilemma. The teacher and tutor served only as judged, while the students played the remaining roles (with the jury included, everyone had a job) with more vigor than was shown for most other programs (the students had been well tutored by Perry Mason and others). While this technique did generate student interest, it seemed less informative than most of the other approaches that have been tried. (LeMoyne College, Memphis, Tennessee)

*

Our psychology seminar lent itself to innovation and student involvement. We were attempting to demonstrate, through laboratory experiments, the manner in which culture influences perception and personality. A number of demonstrations were undertaken including those of perception: the "trapezoid window," auto-kinetic experiments and stereoscopic studies. The equipment used was borrowed from the psychology department of the college; however, the students constructed their own equipment for several experiments. They also established the protocols and procedures for conducting these studies. This physical and mental involvement greatly enhanced their interest in the phenomena experienced.

These experiments in perception piqued the interest of our students in the discussions concerning cultural formation, relevancy, purpose and value. We strongly urge this approach to discussions of culture. (Fort Lewis College, Durango, Colorado)

*

One criticism often aimed at individuals in the poverty culture decries their lack of participation in improving the local community. The Community Problems Workshop was designed to give UPWARD BOUND students a better understanding of Pueblo's problems and to develop student interest in community service work.

The entire UPWARD BOUND student body and staff attended this workshop for three hours on Tuesday and Thursday mornings. Local officials and leaders (the mayor, probation officers, policemen, members of the Human Relations Committee, director of Pueblo's C.A.P., the county Regional Planning Director, etc.) were invited to the workshop by a special student committee. Speakers were urged to keep their presentations short to allow more time for questions and discussion. Sociodrama, films, and panels were also used. In order to involve as many students as possible in the feed-back, five or six small groups were formed following the initial presentation. Each group selected a recorder who presented a summary to the re-assembled group. A general discussion concerning these particular community problems usually followed.

As a result of workshop activities, many students gave up their afternoon recreation periods to work in a local senior citizen's home or to help at War on Poverty Service Centers. Involvement in these activities has continued during the academic year. (Southern Colorado State College, Pueblo, Colorado)

*

Introduction to Technologies -- This course was divided into two 4-week sessions. During the first four weeks opportunities were provided for exploration of various technologies with emphasis on electronic fundamentals as related to several occupations in the areas of air conditioning, automotive, electronics, industrial arts, and mechanical technology.

The second session was an exploration in the use of data processing equipment for scientific, business, and industrial application as well as for related clerical occupations. Students were introduced to data processing equipment including computers, the key punch, sorters, and printers. As a class project, a directory of students and staff attending the summer session was compiled and distributed at the end of the program.

Because emphasis was placed on the importance of mathematical and scientific competency during both sessions, those students interested in technologies became motivated to improve their academic backgrounds in these subjects during their senior year. It should also be mentioned that several girls were enrolled in "Introduction to Technologies." (Southern Colorado State College, Pueblo, Colorado)

*

Great Issues Class: Voter Registration Poll -- While discussing a unit on Citizenship, a Savannah State College UPWARD BOUND class discovered that nationally men tend to vote more readily than women, even though population figures show more women than men. The question was then raised as to whether voters (Negro) in Savannah tended to follow the national trend. The two "Great Issues" classes, which included all students, decided to run a survey in their neighborhoods while at home one weekend. The questions asked were the following: "How many people of voting age are in your family? How many of the people of voting age are registered to vote? Of these, how many are male and how many are female?"

A total of 357 families were interviewed. This yielded 1,000 persons of voting age, 786 of whom were registered. Of these, 451 were male and 335 were female, which indicated to the class that their neighborhoods probably do follow the national trend of voting.

The results of the pool are being published in the Savannah State College Faculty Research Journal. (Savannah State College, Savannah, Georgia)

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The content of our social problems course was determined by the students themselves and proved immensely popular. Community people involved in the problems met with the class on one day of the week. These resource people were not all experts in the academic sense. Some were victims of social evils, some leaders in promoting causes, etc. They included a Negro civil rights leader, a gambler who was "licensed" by the syndicate, a psychiatrist who talked about the art of tatooing and the kinds of pathology represented by the symbols individuals choose to have emblazoned on their hides. A skid row hotel keeper talked about the people who end up on the row and the kind of problems they have there. An hour's discussion of the problem was held the day before the guest came and an hour of discussion and evaluation was held the day after.

Possible headliners for next year include a representative from an "outlaw" motor cycle gang, a hot rod club, an astrologer, a medium, and a member of the clergy, and a convict who has made it in the writing game. Discussion will be centered on the problems of identification for individuals and groups, group pathology, pseudo-science, the "new morality," crises of belief, etc. (University of Minnesota, Minneapolis, Minnesota)

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One rather unusual class which received a good response was called Problems Class. It met twice a week, and presented the students with an unstructured situation in which they chose the topics to be discussed. The following topics were discussed with much interest: race problems, drinking, status symbols, pride, sensitivity and sincerity, religion, parental relationships. We were especially gratified by the students' response to this class, since 58 of our 75 students were Alaska Natives (Eskimo, Indian, Aleut) who are stereotyped as passive, withdrawn, and non-verbal. We believe that they are that way in the high school, largely as a result of fulfilling role expectation. Too, they seem to receive positive reinforcement for their non-contributing behavior in many high school situations. I believe this class did much for these Native students. Many of the students are now exhibiting some degree of leadership back in their high schools, to the great surprise of the teachers and the Caucasian student power structure. (University of Alaska, College, Alaska)

*

Botany - Collections were made of mosses, ferns, flowering plants (including leaves of trees) and classifications were made including divisions, class order, family, genius, species and variety.

After drawing and pressing leaves collected from campus trees, the students went out to the trees for identification for both common names and scientific ones.

Some of the mosses and ferns were used in aquariums and terrariums or vivariums. (Alice Lloyd College, Pippa Passes, Kentucky)

*

Zoology - A collection of insects was made by each student. There was a supply of nets, mounting boxes, pens, chemicals, and identification booklets. Each insect was labeled with the scientific name.

Aquariums were assembled and stocked with local creek fish, crawfish, salamanders, turtles (small ones), tortoises (again small), ferns, moss and certain species of water plants.

A collection of snakes were made (non-poisonous) and kept for awhile.

All the animals were observed and classified from phylum to variety.

Four weeks were devoted to Botany; and four weeks to Zoology.

During both four week periods, much time was spent outside, making observations and collections. (Alice Lloyd College, Pippa Passes, Kentucky)

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Ecology, the study of the interrelationship between plants and animals to the environment, provides an opportunity to introduce the scientific discipline at a level of abstraction satisfactory for this age group. The material is introduced simply at first, becoming more difficult as the students develop.

The fundamental principles of ecology are introduced in class, field and laboratory work. The principle field project is the study of a woodland community. Pond and stream habitats are studied as well. Students are introduced to techniques of field study including methods of collection, identification, mapping of the field area, measurements of environmental factors, use of sampling techniques, as well as other techniques. Laboratory work is carried out in physiological ecology. An independent research project gives each student an opportunity to gain experience in a specific area, hopefully providing a base for future work.

All day field trips provide an opportunity to visit areas of ecological and geological interest in Pennsylvania, Maryland and West Virginia. The program culminates with a four-day trip to Presque Isle to study successions in sand and the sand dune associations. Ponds and lagoons will be studied as well. Visits to Allegheny National Forest, and other areas provides an opportunity to observe virgin stands of timber.

A guest lecture series introduces students to topics in both science and the humanities.

Program concludes with a discussion of man's place in the ecosystem. Students are introduced to the population problem, air and water pollution problems, etc. (Mercersburg Academy, Mercersburg, Pennsylvania)

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Rocketry: UPWARD BOUND -- As compatible as the two parts of the title may seem, the first part did not evolve from the second as a mere inspiration. Rather, I spent quite a few hours wondering about what novel way I could enrich the experiences of those students who had elected science as their special interest. Then, one day, I had the occasion to watch a youngster launch a twelve-inch metal rocket and the idea was conceived: a project with the ultimate goal of each student launching a rocket of his own design and construction.

The inherent values became obvious as I thought about it. The student would learn basic physics of flight and free moving projectiles, apply his imagination to his own design, and finally, mold these ideas into a working vehicle through construction - a creative act often relegated to too many heads and hands.

We started by researching the fascinating history of rocketry and its social, economic, and technological impact upon the world, past and present. We then investigated flight dynamics of projectiles; e.g., relationship of center of mass to stability, relationship of center of lateral area to center of mass, and the most practical arrangements of these elements.

The students had a good opportunity to apply their mathematics in moment and centroid calculations. This accomplishment actually took two weeks to develop. There are less sophisticated approaches, however, to the design math, but with this approach, the students will be able to go independently into more complex designs.

After many weeks of "paper work," the students were ready to apply theory to practice and construct their rockets. The building materials were actually inexpensive and available at the local hobby shop. We decided that the only part that we would purchase would be the rocket propellants. The students didn't have enough chemistry background to explore home brewed propellants, the hazards of which need not be mentioned. Though less exotic, the ready-made propellants come in an infinite variety of sizes and styles, and proved more than adequate.

Competition is loved by youngsters of this age, and it was soon suggested that each builder would make his test flight part of a contest. So, our culminating activity was a contest based on workmanship and flight performance in various size categories. The contest was well received by the students and faculty, who were greatly surprised at the high performance demonstrated by each original design.

All went well with the launchings with no accidents and only an occasional red face as a rocketeer's brainchild failed to recover "gently" because of a faculty recovery system.

Next year we hope to build more sophisticated types and to employ them as research vehicles for high altitude photography, meteorological studies, etc.

This was a pleasant experience for me, and as I went along, I too, became captivated by the excitement and many challenges it offered. And, it's surprising how much you can learn <u>along</u> with the students if you let yourself.

If you are interested in such an activity, I would suggest that you write to Estes Industries, Inc., Penrose, Colorado 81240, for free literature on fundamentals of rocketry and a price list of building supplies. Centuri Engineering Company, Box 1988, Phoenix, Arizona 85001, is another manufacturer of useful items. I would also welcome any inquiries concerning this project.

For something different, give it a try. (State University of New York, Plattsburgh, New York)

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Computer Use in an UPWARD BOUND Mathematics Program -- The UPWARD BOUND program sponsored by SUNY at Plattsburgh, in its first summer session, initiated a study in this field by using the computer as a teaching aid in the elementary calculus class. The students ran a CAI program that was written by the instructor on the mechanics of differentiation. They were fascinated by the responses of the computer, and wished to learn how to program the device.

Individuals participating in the program used Kemeny's book, BASIC, as a resource, and began writing their own programs. Several different programs were developed for solving two equations and two unknowns, solving three equations and three unknowns, and other elementary computing processes.

A measure of anxiety was generated around whether a particular program would run the first time the student put it in the computer. The student operated the computer himself, and was allowed to make mistakes unless he asked for help. Every program was checked before it was tried, but the student was encouraged to try his program with a minimum of advice concerning alterations if the possibility arose that it did not run satisfactorily the first time.

Those who tried simple programs seemed to enjoy it more than those who tried more complex programs. The students were free to apply the computer to any problem, and no attempt was made to teach any preassigned material.

The class used the G.E. computer at Dartmouth through a teletype terminal. On the reconvening of a second summer session involving the use of a computer, an IBM 1440 using FORTRAN IV will be used. Future plans may include the possibility of branching into other related topics, such as logic, Boolean algebra, or number theory. It is hoped that such deviations will be enjoyable as well as profitable.

To develop this kind of program, it is desirable to have a mathematics teacher who is familiar with the practical application of a computer. It is also desirable to have a technician who can serve as an adviser to the students when they run into difficulty. This person would not perform the functions for the students, but would rectify any mechanical difficulties that the students encountered. (State University of New York, Plattsburgh, New York)

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The early afternoons were given for laboratory work and the scope covered was very wide -- the laboratory work not necessarily being directly related to current class material. For example, a speaker-demonstration on the laser, or a planned trip to the Air National Guard which would permit the inspection

of an opened airplane, airplane engines being repaired, and an explanation and demonstration of how a parachute works were some of the activities that were scheduled. (West Virginia State College, Institute, West Virginia)

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The most successful "classes" during the 1966 Summer Phase were the "interest groups," informal discussion periods between students and tutor-counselors (preferably with two counselors per group) on subjects which could be related to UPWARD BOUND students' experiences. For example, one counselor had especial success with discussions of "History of the Reconstruction Period" which dealt with the problems of Negroes in a white society, and with discussions on the Viet Nam war; another found great interest in a literary analysis of the Lord of the Flies, which led into study of the Chester social structure with which UPWARD BOUND students were familiar. (Swarthmore College, Swarthmore, Pennsylvania)

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In conjunction with the classes primarily concerned with communication and expression of thought (English, Drama, Speech, etc.), our students presented a weekly radio program which originated on our campus. These programs were used as a vehicle for communicating the philosophy and purposes of UPWARD BOUND.

The approach in this area was to have the Student Senate appoint spokesmen for the various discussions. In these discussions the students had complete responsibility for scope, content and representation. We found this an extremely rewarding aspect of the communication aspect of our curriculum. (Fort Lewis College, Durango, Colorado)

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Since we operate on the premise that the participants in UPWARD BOUND possess academic potential, the obvious question must be - Why are these youngsters not achieving in high school? The school system cannot be assigned all of the blame. At least some of the difficulty may be attributable to personal problems impinging on the learning situation. Problems common to all teenagers combined with those directly related to ethnic and social class situations create severe blocks to success in school and to success in many other endeavors. The purpose of the group dynamics classes was to talk over problems that interfere with adjustment, particularly those that interfere with academic achievement. Since it was assumed that one type of problem common to all teenagers involved sexual adjustment, it was decided to have males and females meet separately to allow for freer discussion.

Our assumption then was that separate male and female classes would present more freedom for most types of discussions involving teenagers, especially those relating to dating and heterosexual relationships. Our experiences throughout the summer supported this assumption. Coeducational classes were used on occasion to discuss other types of problems, including the need for better study habits, and to highlight some of the points raised in discussing heterosexual concerns.

Most of the students were also seen in individual consultation sessions and some problems perhaps only peripherally discussed in class were followed up

by more in-depth private discussions. The results of the private and group sessions were generally quite fruitful. The fact that the students could verbalize their problems was very helpful. Students not only realized that others shared the same problems but also found that by helping others to solve their problems they were actually helping themselves. The result was that most students developed socially acceptable ways of dealing with most of their problems.

One of the most satisfying empirical findings of our own evaluation of the program so far has been the sharp reduction in disciplinary difficulties for UPWARD BOUND students in high school. We attribute this reduction at least in part to the group dynamics sessions and related program activities.

The building of "self-image" in group dynamics classes was also supported by the methods of instruction and individual attention adopted by social issues and language arts instructors. (Queens College of the City University of New York, Flushing, New York)

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Any student was permitted to change from one group to another. (Example) A student taking math decides he needs help in science, he or she requests permission to make the change and gives reason for action. A student taking Industrial Arts and completes his project in 4 weeks may want to try art or agriculture for the remaining 4 weeks or 2 weeks in art and 2 weeks in agriculture. (Eastern Kentucky University, Richmond, Kentucky)

*

Modern Dance was offered during two periods. Each class session included participation in dance techniques as well as discussions of the concepts of the art form, leading up to compositional ability. Observable, tentative results included the ability of the students to distinguish between various schools of dance based upon an intellectual awareness of the factors of space, time and force as united in good dance composition. The history of the dance was woven into the program.

The record player and tape recorder were utilized in performing. During the main part of the session many books (preferably with pictures), and a series of weekly movies were invaluable in expanding the students' experiences in the field of dance. A field trip to a dance studio, including both observation and participation by the students, enhanced aspirations for continued study in the field.

Modern dance in a classroom situation lends itself to total group, small group, and individual participation. In these situations the students developed several different roles; either conforming to the entire group; assuming responsibilities as a unit of three, four or five persons, or by becoming a leader. The program demanded both physical and intellectual participation by each student. Because of the individual interpretation of the material, each student was constantly involved in a selective process, either accepting or rejecting values relating to dance. Their achievements and efforts were highly

praised when they performed for parents and faculty at the end of the program. (Kingsborough Community College of the City University of New York, Brooklyn, New York)

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The Teachers College Journal of Indiana State University at Terre Haute has devoted its entire issue of January, 1967 (Volume XXXVIII, Number 4) to the UPWARD BOUND Project on that campus. In addition to detailed material on many aspects of the project, the issue also contains a useful general bibliography.

The Project Director, Dr. Daniel Jordan, has mailed one copy to each other Project Director in the national program; additional copies can be secured on application to Dr. Jordan.

C.

Contemporary Music in the English Class: In our program to encourage underachievers to talk and write with conviction and competence, we have tried many techniques at Mercer University's UPWARD BOUND Program. One of the most successful ideas has been a series of three lessons using contemporary "folk-rock" music as a bridge to other forms of expression.

The record we used was Sounds of Silence by Simon and Garfunkel. Although some of our students had heard the group on radio no one owned the record or knew anyone who did and they were very eager to work with it. Many lingered after class to play it again. Our program meets only on Saturday morning and, since we interspersed these three lessons with other activities, they were two or three weeks apart. This helped maintain high interest in this type of presentation.

The materials we used were:

A Search for Awareness, John H. Bens, Holt, Rinehart Winston, 1966
Sounds of Silence, Simon and Garfunkel, Columbia Records, CL 2469
The New Pocket Anthology of American Verse, (W. 552) Oscar Williams, ed., Washington Square Press, Inc., New York, 60¢.
The Atlantic, March, 1967

The first lesson in which we used this record was centered around "Richard Cory," first the poem by Edward Arlington Robinson and then Simon and Garfunkel's song with the same title (side II, band 1). Our presentation was designed for a class of thirty, which was divided into four groups for discussion. The basic lesson plan was as follows:

"Richard Cory"

Goals: To gain skills in thoughtful reading.
To gain a better understanding of important human needs.
To see how a change in environment changes the individual.
To see how a sincere attempt to deal with your environment is a must in writing.

I. "Richard Cory," Edward Arlington Robinson, p. 153.

A Search for Awareness

1. Read poem aloud.
2. Discuss setting.
3. What is Richard Cory's relationship to the community?
4. Who are "we?"
5. Is this poem about Richard Cory? About "we?"
6. What is the message? Who gets the message?

II. "Richard Cory," P. Simon, side II band 1, Sounds of Silence.

1. Play record. (You may want to play it once or twice more during discussion for reference)
2. Discuss setting.
3. What is this Richard Cory's relationship to the first person? (more removed)
4. Why does the record use "I" instead of "we?" Is this important? Is this connected with the changed setting?
5. How is the ending different in the record? Does this change the message?

III. Why isn't Simon and Garfunkel's version plagiarism?

1. The medium is changed from a poem to a song.
2. The setting is changed from a 19th century American small town to a 20th century English industrial city and the message changed accordingly. Some parallels might be Romeo and Juliet and West Side Story, or J. B. and the Book of Job.

IV. Assignment:

Suppose you wanted to work with this idea? You might want to write a short story or a play. The developing character would still be you -- your eyes would be the lens, your environment the setting? Want to try?

III

The second lesson which we built around this record dealt with the problem of the person who is out of contact with others. A number of clippings from current newspapers supplemented the material used. Clippings dealing with hermits, misers, etc., are especially useful.

Social Isolation

Goals: To discover the difference between a literal and an interpretive presentation.
To gain a better understanding of important human needs.

Materials:
Some current obituaries from local papers.
"A Most Peculiar Man," P. Simon, side II band 2, Sounds of Silence.
"The Nameless Ones," Conrad Aiken, p. 26 The New Pocket Anthology of American Verse.
(Optional) "Love is Not All," Edna St. Vincent Millay, A Search for Awareness, p. 106

Supplementary skills: Finding the main idea and the facts; using new vocabulary: ostracise; obituary; vulnerable.

I. 1. Introduce record: ask students to listen for who, what, where, when, how, why.
2. Play record.
3. Question students.

a. Who is the story about?
b. What happens?
c. How does it happen?

4. If students don't, teacher presses the "why."
   a. (Elicit) because he "wasn't friendly" and "he didn't care" and "he wasn't like them."
   b. (Elicit) The man must have cared or he wouldn't have killed himself.
   c. (Elicit) The man cared about other people, but was afraid he would be hurt if he tried to be vulnerable. (teach)
5. Play the record again.

II. Contrast song with obituaries.

1. Distribute copies of straight news obituaries from local paper.
2. Do obituaries give more or fewer facts than the song? (Names, ages, employment, education, etc.)
3. Do we therefore learn more from the obituary of a stranger than from the record? Will we remember the obituary a week from now? the song?
4. Why is "peculiar man" not called by name?

III. Read "The Nameless Ones."

1. What type of person is Aiken writing about?
2. What economic status? What race? What age? What religion? What sex? (any and all).
3. Find passages in "The Nameless Ones" which describe "A Most Peculiar Man" or express ideas which also appear in the song.

IV. Assignment possibilities:

1. Compare "peculiar man" with Richard Cory.
2. Draw one of the Conrad Aiken's "nameless ones."

IV

The third of this series deals again with man's need for a positive relationship with others. The materials for this lesson are:

"No Man is an Island" (from Meditation XVII), John Donne, p. 103, A Search for Awareness.
"I Am a Rock," P. Simon, side II, band 5, Sound of Silence.
"Birthday in the House of the Poor," Jeanette Nichols, The Atlantic, March 1967, p. 94.

Donne's paragraph deals with a theological concept that any man stands for or is interchangeable with all men within the rituals of the church; however, it can be read as a simple declaration of the brotherhood of man or of man's social nature.

The song "I am a Rock" is defiance of this concept, a retreat from the danger that vulnerability may lead to hurt.

The poem "Birthday in the House of the Poor" is one dealing with the ambivalence of one whose need for love and need for defense against rejection are at war.

Some questions which might be used for discussion or for a writing exercise are:

1. What are the consequences of withdrawing from others?
2. What are some of the ways people withdraw from one another?
3. Does anyone have a moral right to withdraw from society? from individuals (such as family members)?

V

We enjoyed working with these lessons and so did the students. A number of students have borrowed the record to play for their classes in public school when they read the poem "Richard Cory" there. Many students are deeply moved by "folk-rock" music and feel that it speaks for them. We have found it a useful interpreter in the classroom. (Mercer University, Macon, Georgia)

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Goals: Improvement of use of verbal communication of every area, especially when used before groups.

Specific Goals: To help students: gain self confidence in speaking before others; express their thoughts with clarity and meaning. Another area will be to learn some verbal skills of leadership such as running meetings, leading discussions, moderating panels and debates, introducing guests and events, acting as guides for events. For those students who may need special individual help for serious speech problems, some can be handled within the program; those who may have problems needing a specialist, such as with severe stuttering and voice problems can be referred outside the program.

It is hoped that much of the subject matter and many of the activities can be coordinated with the rest of the UPWARD BOUND program.

Subject Matter: For discussions, panels and debates can include: material from morning English classes, such as the meaning of certain essays or stories, discussions of films viewed, discussions or talks about cultural events attended, also on any controversial area that may arise within the program itself.

Other topics for speaking, panels, debates, that can be opened to other students perhaps on a few evenings or at odd afternoon hours could be: juvenile delinquency, dating, the adolescent and his parent, television and its contribution, and others which the students might request.

For more formal speaking in the workshops -- or opened to others, for which research will be needed, such topics as public housing, bond issues, politics in general might be used.

It is hoped that mock meetings such as sorority and fraternity meetings, political meetings, neighborhood meetings, can be set up, and if interest to others, opened to all.

Coordination with UPWARD BOUND: Of tremendous value and importance. Such things as giving an after-dinner speech, introducing guests, cultural events, guiding tours, etc., could be the very REAL experience that cannot be given in the structured workshop. Hopefully, plans can be made with the Social Events Committee to arrange definite roles for speech students, and definite assignments will be made. Each student would be counseled for his event.

Structure of Speech Program: Either two separate groups meeting once a week, or one group meeting twice a week, or two groups meeting twice a week. Alternatives depend on number of students in program. Hours: Workshop in afternoon and 1 or 2 P.M.; the teacher(s) will be available the other two hours of the afternoon for individual counseling, either for assigned speech, or special problems, or one of several individual sessions each student will have to hear and criticize tapes. The fifth afternoon can be used for coordination, planning, further counseling, and if there are two separate speech groups, that afternoon can be used for joint sessions for debate, etc. (Webster College, St. Louis, Missouri)

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The Communications Course: The students in the Communications Course last summer had become used to the idea somewhere along the line of education that the language, the words they had heard all their life long, whether in the home or in the streets, were inadequate. Consequently, what they had to say had a long history of being put down, and by the time they came to UPWARD BOUND these students, out of habit mostly, felt that they had little to say. My immediate desire for them was to convince them not only that they had legitimate things to say, legitimate emotions, but also that there was more than just a handful of people around who understood, and enjoyed, their personalities and the words they used in expressing their own rather sophisticated and complicated emotions and ideas.

The first part of the course was devoted to convincing them of their legitimate expression. Several times the students wrote what they thought were "off-color" remarks. They expected to be put down, dismissed as somehow ridiculous, as clowns. The clowning stopped when I laughed with them, and when I told them the sexual references were not only interesting, but had a lot of other possibilities. One girl got so enthused that she wrote pages of sexual puns, metaphors, and more important, was trying to express other emotions with the language she had been used to hearing and speaking.

I played blues records for them, jazz, rhythm and blues, and showed them how subtle the lyrics really were, how Ray Charles was singing about much more than the girl who had left him. From there I talked about what things were

involved in trying to "make it" to the top, in the "other side of the tracks," in bringing something "on home," in talking "like folks," in "moving on down the line," in "getting somewhere fast." I talked about the American Depression, the World Wars, got them used to thinking how much of them was really in the mainstream of our civilization. Most important, however, was getting them to express themselves in relation to these ideas, how really human and worth it they were, and perhaps how they could use their connections to make some headway in an increasingly impersonal society. Almost every day I had them write for an hour on what I talked about with them during the hour before. Some slept, but even they got tired of sleeping, and decided maybe to try signifying what they knew, and were often surprised at what they came up with. After a while the students stopped trying to express facades, and became quite straightforward in what they would say. And they knew what they were saying. One time I handed out mimeographed copies of what they had written the day before, but the essays were fixed up, edited. The students were hurt, angry, or indignant. The fact that they could get this way was important, that they could get used to verbalizing their discontent over legitimate things.

The class took trips to New York City, and a few times spent mornings places in the country. I asked them to translate experiences into words. We read short, often hard-hitting poems; we wrote as a class similar poems. The class was asked to write, write, write; and words, all kinds of words were tossed about, all the time, even when they were tired, to the point where the language of one world and the language of another became inextricably (I hope for more than a moment) mixed and enlarged. The words and ideas thrown about couldn't help but become enfused in their thinking, in ways they were not aware of. Several students often became so engrossed in what they were writing that no one could interrupt them.

The result was the anthology, Out on a Limb, which had among other things, a personality all its own. And they were quite happy about others reading what they had to say. (Trenton State College, Trenton, New Jersey)

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The study of the Chester social structure as it grew out of the analysis of The Lord of the Flies: When I confronted my first interest group on Lord of the Flies, I found two plump girls and four big thugs. I couldn't see how to unify the class: some couldn't read well enough; one couldn't see; the boys refused to read out of class each night; no two could work on the same level. My original goals just weren't salvageable. Reading this book was to have won souls for literature and high school English classes which they hate so. Vocabulary work and remedial reading were to have been secondary. Under the guise of creative writing in response to the story, composition was to have lurked -- painless, unseen.

I'd chosen Golding's work because it would place the kids in another physical world (a jungle island) while forcing them to draw analogies between their life in Chester and the boys' activities on the island. They got the analogies without much help -- and refused to do any more with How To Read A Book. We became a sociology class: they lectured expansively; I asked questions

and became their student for an hour and a half every day. The boys began to talk about corner life in Chester: how isolated it was from the rest of the city. They analyzed the characters in the novel by telling me what would happen to a Ralph or a Jack or a Piggy if the plane had crashed in a project instead of the south seas. They all sympathized with Ralph, but they admitted that they were forced to behave more like Jack in order to lead their groups by Chester rules. They drew me maps of Chester and pointed out that the boys on the island had a lot more space and freedom, for dividing lines in the city were very strictly drawn -- a guy couldn't go into some areas without his guard; he couldn't walk in a straight line across the city without trespassing and endangering his whole group. They talked about changing conditions, saying that gangs weren't as violent or well organized as before, that loose corner groups were more common. They offered me a tour of the places they hung out so I could see what the maps couldn't say.

One day they talked about the crimes the boys on the island began to commit against each other and then proudly related their own crimes. They told me that you stole a white but not a Negro lady's pocketbook because the old Negro ladies would chase you, poke things at you, raise a fuss, while the white ladies just dropped the goods and ran. They described how you rolled a drunk coming out of the Third Street bars, or how you drank a lot of T-bird and dropped logs onto cars from the highway overpass. Three of the four boys said they had experience with juvenile court; one had spent a night in jail and was on probation. They talked about preparing weapons for possible fights, raiding gigs, the other "chores" of just living in Chester after school and past the 10:30 curfew. While admitting that there was too much Jack and the Beast in the whole situation, they didn't see how things could change. They were surprisingly critical but wholly resigned. The summers especially were hard -- and even boring. One reason these boys came to the UPWARD BOUND program was just to check it out.

If I could teach the course again, I'd have them write a short novel of their own which they could ditto and give to the other students. They wanted to share how they lived -- they said they'd never talked about it so much before. Towards the end of the sessions they asked me where I came from, where I'd been, what I'd seen. They were surprised that England and New England weren't the same place -- but they listened, and compared, whether out of interest or just to offer me equal time. Their final judgment of me was that I'd missed a lot, that I made dumb mistakes when I asked about Chester, but that the navy came to rescue me from the island more often. (Swarthmore College, Swarthmore, Pennsylvania)

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One of the first pieces of advice given a teacher of culturally deprived students is "Don't give them unfamiliar reading matter. Stick to settings and experiences they have known."

Perhaps this is an easy thing to do in a homogeneous program, but when you have, as Mercer does, white and Negro, rural and urban, boys and girls, and a sizeable group from orphanages, this is not so easy. Much of our work, therefore, deals with expanding the student's imagination and interest to

help him be more receptive to reading about times, places and cultures other than his own. The following is a unit which produced some very encouraging student writing.

Seeing is Believing
Or is It?

Goals: To work with the idea that the way we see the world is affected by our culture -- we see what we expect to see. To try to see the world from a slightly different angle. To learn to be receptive to ideas and settings which are unfamiliar to us.

Materials: "A Schoolman's Guide to Marshall McLuhan," John M. Culkin, Saturday Review, March 18, 1967, postulate 1, page 53

"Dog," Lawrence Ferlinghetti, A Coney Island of the Mind, New Directions Paperback, 1958, p. 67, $1.00
Or Tentative Description of a Dinner -- and Other Poems by Lawrence Ferlinghetti, Fantasy Record 7004.

"Waiting and Peeking," p. 247 (optional) New Pocket Anthology of American Verse

Stop, Look and Write, Hart Day Leavitt and David A. Sohn, SP88 Bantam Pathfinder Edition, 75¢

Sample Procedure:

I Read or play record of "Dog." Allow some free discussion. How is dog's world different from ours? Why does he see "moons on trees?"

II Some animals do not see color -- we do. Is our picture of a flower "truer" than the dogs? A dog can hear sounds that are inaudible to us. Does a dog get a "truer" sense of the world?

Animals do not perceive the world as we do -- their senses are different.

Animals can hear sounds that are inaudible to humans. Many animals have no depth perception because their eyes face the sides. Animals can smell more keenly. Some insects have 360° vision (try to imagine that).

Is the animal's perception more or less true than ours?

III Look on p. 167 of Stop, Look and Write. An old initiation stunt is to heat a poker red hot, tell the initiate that he is to be branded, blindfold him and touch him with an icecube. His senses will be confused by his preconception and he will scream and perhaps faint. The girl on p. 167 "feels" whatever she has been told she will step in. Our senses bring us data but we structure this data as we have been taught to.

IV Now look on p. 173 of Stop, Look and Write. Hate to meet him on a forest path wouldn't you? Now pretend you are a baby gorilla. You're lost and some bad boys are picking on you. Suddenly you look up and Daddy G. has come to your rescue. How does he look to you now? Brave and bold and a heart of gold, yes? Sort of a hairy Ben Cartwright.

V Read McLuhan excerpt aloud and invite comment.

VI Some ideas to toss out if needed: Paranoid -- "The messes that happen to me cannot be my own doing so there must be a vast conspiracy." Everything that happens fits this theory?

Narrow-mindedness is correlated with limited vocabulary. We don't make distinctions we haven't words for.

Magic -- a person who really believeshimself hexed will die. A person who doesn't believe in it will not be affected.

"Alfie" is the tragedy of a person who cannot imagine the other person's feeling -- no empathy.

VII Assignment -- an imagination-stretcher. Look on p. 93 in Stop, Look and Write. You are this fly. Write in the first person a narration/description of your situation. Remember that you are a fly and not a human in fly's clothing. What could a biologist tell you about the fly that would help you with this assignment?
(Mercer University, Macon, Georgia)

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Language Arts: Instructors of language arts and social issues classes (see next item) worked closely together. Students were encouraged to write when they were particularly "bothered" or thought they needed to "set the record straight." Each student was expected to submit a minimum amount of work -- five (5) written assignments. These were corrected for grammar as well as rational and logical thought and stressed creativity and analysis rather than summary and synopsis. Papers of students were exchanged and jointly evaluated by language arts and social issues teachers. In short, the job of evaluating the progress of each student was a joint venture.

Six (6) books were read during the summer - four (4) in social issues and two (2) in language arts, though the books were discussed in all classes:

Social Issues	Language Arts
1. Kaufman - Up the Down Staircase	1. Salinger - Catcher in the Rye
2. Gregory - Nigger	2. Orwell - Animal Farm
3. Wakefield - Island in the City	
4. Burdick - The Ugly American	

Use was also made of such pedagogical devices as field trips, debates, and role playing. Debates and role playing were useful techniques for "drawing

out" students. An example of role playing adopted by two (2) social issues instructors was simulated "Meet the Press" panels where students had the opportunity to play Chet Huntley, David Brinkley, etc. This type of academic activity is highly recommended. (Queens College of the City University of New York, Flushing, New York)

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Social Issues: There were five (5) social issues classes with 12 students in each class. The classes were heterogeneously grouped. As the students were to a significant degree already "tracked" in their respective high schools, heterogeneous grouping provided the opportunity to interact in a more democratic setting. Although students recognized that some were indeed more capable in some respects than others (e.g. academically, socially, athletically), this did not hinder the progress of the class nor "retard" academic growth. Indeed, the students were able to recognize and accept the limitations of their peers (e.g. language difficulty), which was a significant part of the learning process.

The main idea behind the social issues and language arts classes was to encourage students to go beyond mere description of the events around them to an understanding of why the events are the way they are. Societal institutions, racial and cultural relations, pathology and deviance, and international relations were major units of our courses. More specific topics for discussion and critical analysis included community reactions to civilian review boards, housing complaints, school systems, political protests, "black power," etc. Discussions were geared so that each member of the class would be able to contribute something from his or her own experiences. Many students were able to draw upon personal experiences and thereby illuminate the topics being discussed. Discussions became more theoretical in nature (e.g. see attached outline on "Justifying Civil Disobedience" by Rudolph H. Weingartner) as the students became more able to deal abstractly with different situations. (Queens College of the City University of New York, Flushing, New York)

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"Justifying Civil Disobedience": Group Dynamics --

1. The wrongness of the law.
2. The purity and strength of the motive.
3. The forseeable consequences of the act.
4. The availability of alternative methods of reform.
5. Conscientiousness and evidence.

(Queens College of the City University of New York, Flushing, New York)

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Nature of Man Course at the Mercersburg Academy: In an age when students face a world that changes rapidly in terms of science and technology, it is vital that man himself receive serious attention in terms of his nature, his societies, his cultures, and his religions.

What is the significance of the discovery that man-like creatures in Africa made tools 1,750,000 years ago? Has society, like man himself, developed in an evolutionary fashion? Do myths and folklore provide an insight to men's past before history was written? What are the origins of the races of man that are the focus of so much tension today? Is man by nature peaceful or warlike? Was Freud correct in his analysis of the human personality? How much can man learn about himself by studying animal behavior? Can or should science attempt to control the genes of man? Are all men alike in basic nature? Do science and religion agree regarding man's nature? Can the world's religions meet on common ground in terms of man's values and ideals?

The texts used were: African Genesis by Robert Ardrey, The Science of Man by Mischa Titiev, The Psychology of Adjustment by L. F. Shaffer and E. J. Shoben, Jr., and Occidental Mythology by Joseph Campbell.

Trips were conducted to the Washington Zoo to observe primate behavior; to the Pavlovian Laboratories at the Perry Point Veterans Hospital in Maryland to observe animal behavior in a more controlled environment; to the Pennsylvania State University Archaeological Site at Raystown Dam near Huntingdon, Pennsylvania. Speakers were heard on genetics, psychology, mythology, and religion. Movies were used profusely and dealt with psychology, analysis of primitive cultures, dreams and hypnosis, etc.

The enclosed quotation, from a letter that went out to the members of the group at the end of the session, summarizes the conclusions of John and Kay Ferguson, the instructors in the course, and gives an idea of the discussion and work that went on in the course by the questions that were suggested for future study:

"Did we, as a group, discover the nature of man? Perhaps. But at least we demonstrated that an understanding of anthropology, psychology, mythology, and religion is a vital basis for any rational approach to the bewildering patterns of man's behavior. The following topics seem to remain as points of focus for further thought and study: the mechanics of evolutionary change; the problem of the beaver dams and a chimp's fear of snakes; the growth of the cortex; the prevalence of the aggressive or predator drives in individual or group animals or men; the relevance of animal behavior to human behavior; the meaning of cave art and early symbols; the evolution and possible elimination of the "id;" the future development of large group-animals such as nations; the success on a long-term basis of sublimation of animal drives; the value and meaning of man's "visions" in dreams, LSD states, meditations, and the fantasies of the mentally ill; man's need for myth in the future; the thorny problem of race in terms of evolution and the future; the role of dominance in prolonging the myth of "The Others;" the question of "universal" symbols; the motivation of a leader; the reasons for the lack of "progress" in certain cultures; the future of the world's existing religions in the Space Age; the problem of evaluating "Progress;" the discovery of programmed or inherited drives and behavior in man; an analysis of science as today's myth; the possible limitation by the group of an individual's right to reproduce; and the future of the individual and his freedom. (Mercersburg Academy, Mercersburg, Pennsylvania)

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One aspect of the Stony Brook UPWARD BOUND Project was the deliberate attempt made to have the undergraduate college students who served as "counselors" also play a significant role as "tutor" and "teacher." In this regard, occasions were structured so that selected counselors could have the opportunity to serve as classroom teacher for a limited period of time. The account which follows relates the work of one such counselor-teacher and is typical of a pattern of "reaching out" on the part of the counselors in their efforts to explore various techniques designed to encourage student participation and involvement in the teaching-learning situation.

For several class sessions, the UPWARD BOUND students had been dealing with the themes of education and the character or role of ideal leadership with respect to education. The counselor-teacher had been looking for some way to dramatize the essence of the discussion and decided that the "Allegory of the Cave" from Book VII of Plato's Republic would make an interesting dramatization.

Class was scheduled in an air-conditioned windowless lecture hall (which could be placed in total darkness with the flick of a switch) equipped with a projector and screen. The teacher introduced the idea to the students and asked, "What would we need if we were to act out the allegory of the cave which we have been discussing?" As objects were named, the teacher and the students produced the necessary regalia -- a light source; a wall to cast shadows upon; inhabitants of the cave; something to prevent the inhabitants of the cave from turning around; objects to cast shadows, etc.

Six students sat on the table in front of the screen. Each wore sunglasses with 5 x 7 index cards taped on like blinders. The students agreed not to turn around; therefore, like the chained inhabitants of the cave, they would only be able to see what was directly in front of them -- i.e. the shadows on the screen.

The situation was briefly discussed with the class. Then, the teacher turned off the lights and placed the room in total darkness. The projector was turned on and several objects held before the lens, the objects casting shadows on the screen: a book; record album cover; tape dispenser; baseball glove; and even one student from the class stood in front of the projector and cast her shadow.

The six "chained inhabitants of the cave" were asked to describe and identify what they saw. They were unable to identify either the book or the tape dispenser. Standing next to the projector, the teacher held up the book and asked two students "of the cave" to turn, take off their glasses and identify the object in question. They were blinded by the light from the projector and showed their frustration. He then took one student, who conveniently stumbled, and led him to the projector. The book was identified, including its title, author, subject, nature, etc. The advantageousness of the shadows or seeing the objects themselves in the light, was discussed, as well as the question of who was best equipped to lead the others out of the cave, the best way to lead them, how to convince them to leave, etc.

The lights were turned on and a general discussion followed; it was quite a lively one with widespread participation -- something which had not been common before. The allegory was discussed in terms of the nature of education and ignorance, methods of education, the nature of the learning experience, and the roles of students and teachers. From here, the discussion moved to a consideration of shadows and things themselves, and reality in the Platonic and empirical concept of the term. The students moved to the issue of reality and "truth" -- what is it, where does truth reside, etc. And here the period ended ("unfortunately," reported the teacher).

In the belief that an individual's perceptions of an experience are extremely important to an understanding of the experience itself, it is important to inquire into the reactions of both the students and the teacher. The students reported great interest in the "allegory of the cave lesson" as they referred to it. It became the subject of much discussion for several days, and was talked about not only in other classes, but at meals, and in the dorms at night. It had the quality of being a common experience which held a special fascination or significance for the students. Perhaps they sensed a certain sophistication in walking around a college campus "talking about Plato."

As for the teacher's perceptions, it might be best to let him speak for himself, let's listen:

> The nature, depth, and complexity of this discussion was "college level," if one must speak of "levels." The students' level of sophistication, i.e. their ability to discriminate and differentiate, their tolerance of ambiguity and their ability to continue inquiry in the face of it, was an inspiring and profoundly rewarding experience. After such an experience, the idea of using material "on their level" is ridiculous. The problem is one of communication, but only with regard to finding the appropriate symbols. The demonstration provided us all with a host of commonly meaningful symbols. If a teacher can solve the problem of meaningful presentation with any piece of material, then it is suitable for class material. <u>It need not be "watered down"</u> or simplified. The problem of teaching these students is not a question of their cognizance, or conceptualization -- they have it. It is a problem of <u>appropriate</u> symbols, of mutually <u>meaningful</u> expression.

A legitimate question to ask is "Has (or how much has) Plato suffered in such a treatment of the allegory of the cave?" Although no attempt will be made to deal with this question here, it must of course be considered by the Stony Brook project staff. The incident is reported here because I believe that UPWARD BOUND projects can profit from sharing one undergraduate college student's attempt to wrestle with the problem of getting "reluctant learners" to visualize a very difficult philosophical concept. This article then is neither a defense for or an attack upon the procedure herein related, but rather a description of something that happened. In this sense, it is best read as a case study of one counselor-teacher's attempt to try something special with his kids and his class. (State University of New York at Stony Brook)

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Core Curriculum; Tentative Course Plan; The History of the Eastern Upper Peninsula

Basic Aims: This course sets the theme for the whole summer program. It has four basic aims. First, it will motivate the student to do his best in the academic work in this course and in the related courses of the summer program. Second, it will help the student to overcome the contemporary feeling of isolation, by helping him to develop a knowledge of himself and his family through the study of local economic, social, political and cultural history. This is actually the history of the world, as seen in and from the Eastern Upper Peninsula of Michigan. Third, it will introduce the student to an important academic discipline, but this will be introduced from the standpoint of active research, rather than from the traditional lecture approach. Fourth, this research will be conducted with a definite end in view -- to make a recognizable contribution to the Tri-Centennial Celebration scheduled for the summer of 1968.

Specific Objectives:

1. To motivate the student to do his best work in the whole summer program.
2. To help the student to see himself as a part of local history, as a part of local history, as a temporary end result of an ongoing process, which he will influence in his turn.
3. To teach the student the rudiments of an academic discipline, one which he may wish to pursue in college.
4. To direct the student in creative work which will make a recognizable contribution to the study of the history of the local area and to the Tri-Centennial Celebration.

Tentative Course Plan: As soon as the staff for this course has been selected, it will discuss a list of possible local historical topics with the Tri-Centennial Celebration Committee, and it will select three which fit the Basic Aims of the course. The three topics will be ones that have considerable primary source material available in separate local places.

Each member of the staff will then take charge of one of the topics, which he will handle for the whole summer. Before the beginning of the Orientation Week, he will familiarize himself with the historical context of the specific topic and make all the necessary arrangements for the research to be done during the summer.

A. For example, the three topics to be studied might be:

   1. The history of the lumber boom in the Upper Peninsula
   2. The history of the Soo Locks
   3. The history of the Bay Mills Indian Reservation

Each of these general topics might have to be narrowed down, but a general introduction to each of the topics would be more valuable than a study of a narrow problem in depth. Each of these topics would have a different location for the main source of primary material -- the lumber boom could be studied at the archives of the local newspaper, the locks at the local headquarters of the Corps of Engineers, and the Indian history on the reservation.

Valuable information could also be sought at the local library, from local experts (there are many), by interviewing participants in these historical events, or their descendants, and by working with papers and other materials which have been inherited from such people by local families. If an Indian topic is used it will be worked both by students who are Indians and those who are not. Finally, it must again be emphasized that these are only examples from a large number of good possible topics.

B. The course itself will then be set up along the following lines:

1. A one hour lecture each week, for all students. This lecture will emphasize the general history of the local area, and local experts will be used as much as possible.

2. Two discussion periods, of one hour each, will be held each week. For this the students will be divided into three equal groups. The members of each group will do all their work for one instructor, on the topic which that instructor has prepared. The work done during these meetings will include the discussion of the lecture, but it will be aimed primarily at coordinating the individual work done by the students. Some meetings will consist of lectures given by local experts, with discussion following the lecture.

3. Each student will schedule a two hour "lab" each week. These labs will be field trips, taken with the instructor whose discussion section the student attends. These labs will have only four students in each, so that the student will be able to work with the instructor, as a junior colleague, on research in the topic area. It is possible that some labs, perhaps all those given by a particular instructor, might be able to take more students, especially if the field work is to be done in places where more than four students can work conveniently. Only the first four weeks will be spent on field trips. In the fifth week the students will organize, write, and "publish" the results of their research on their topic. This publication will be in the form of a short booklet about the topics they have studied; these will be mimeographed, with the students' names on the title page, and every effort will be made to produce booklets which the Tri-Centennial Committee will want to have printed for use during the Celebration year.

4. At the end of the fifth week and during the sixth week, there will be three field trips for all students, to the areas in which the history they have studied actually took place. The booklets will serve as guidebooks for the trips, and they may well be written especially for such a purpose. At least one of the trips will be to a local area, such as the Soo Locks, and it will only take half a day. One of the other trips may also be of this nature, but one of the trips (perhaps to the former site of a lumber boom town) will take all day -- probably the fifth Saturday of the program. This trip, by bus, will also be

recreational, and might include a swim and a cook-out. It is also quite possible that a certain amount of historical study might be included in trips taken by the group in other courses in the program.

5. It can easily be seen that the students will need some unscheduled time, especially during the fifth week, to complete the writing of their projects.

6. The actual publication of the booklets could probably best be handled as an activity, under the supervision of both the History and the Communication Skills faculties, much the same way that student committees publish school yearbooks.

7. There are also other activities which would fit well into the theme, such as an art group which could prepare displays for the Tri-Centennial Celebration.

(Lake Superior State College, Sault Ste. Marie, Michigan)

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The history course on the Reconstruction Period, which used J. H. Franklin's Reconstruction: After the Civil War (1962) as text, was designed to provide a basic framework for knowledge and discussion of the Negro's role in American history, past and present. The Reconstruction era was chosen because of the Negro's increased importance in society and politics and because of certain similarities of the pressures, choices, and problems facing the Negro then to those of the present. The book was chosen for two reasons: it was somewhat advanced for the campers and thus a challenge, yet its short length made completion in three weeks possible; and its author is a Negro. Twenty pages of reading or its equivalent in time was the length of home assignments, which were usually done to the best of the camper's ability. If not, the opportunity was presented to discuss the individual camper's personal problems.

The course had a variety of basic aims: to give the campers pride in Negro heritage; to push them to air their feelings about and to increase their understanding of their own condition through probing discussion; to suggest various possible ways to ameliorate their condition; and to better basic academic skills (e.g. reading comprehension, debate, writing). Class time was spent in a variety of ways: debates on assignments, oral and written reports on the meaning of a chapter in the book, discussion of minority problems, and, at the end of the program, a most successful debate by six class members on the Emancipation Proclamation before the whole camp with audience participation. A good deal of flexibility and spontaneity was absolutely necessary to get the most out of the campers. Discussion and paper topics ranged from their feelings on sex to what they were most and least proud of about being Negroes, all of which were valuable for more effective individual and group counseling. The counselor-teacher acted largely as a moderator to direct and channel discussion, but also participated by arguing and airing his own views, if only to provoke more heated discussion. (Swarthmore College, Swarthmore, Pennsylvania)

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Then about a week after the program was under way, I added an extra, voluntary, and quite informal meeting. Each evening as darkness was just setting in, I began to call by telephone six to eight individuals at random to gather at the science building, and then as a group we would go up to the roof. The 6-inch telescope, belonging to the college physics department, but to which we had access, is housed there and we would carry it out of the small enclosure onto the open roof. The moon of course was the largest single attraction. For some, it was the first time ever to see the moon through a telescope, and it was also the first time to observe first hand that the moon is upside down when viewed in this manner. Seeing the effects of earth shine (which is that reflected light from the earth which dimly illuminates the part of the moon that appears dark to us) and thus being able to observe that the moon is still actually round -- even in those days shortly after the new moon were new experiences for many in this group. Naturally they had already known the moon was round, but they, like us, are similar to the citizens of the state of Missouri in that they also like to be able to observe the situation, not just be told about it. Now the opportunities for teaching in a situation like this are self-evident: from the correct method of adjusting the telescope eyepiece, to the effects of the atmosphere on star observation; from a discussion of the color differences in the heavenly bodies to an understanding of the facts surrounding the stark realization that nothing much happens when someone places his hand over the skyward end of the telescope. Topics like these can arise quite naturally during such a meeting. Soon the telephone calls to collect the groups together proved too great an inconvenience, since at 9 o'clock in the evening not necessarily all the students were in their dorms studying. So throughout the day I would let students know that we were meeting on the steps at 9 o'clock if the moon were good, and that if they wanted to come, we'd see them there. In this way I varied the groupings so all who desired could come along, and certain students requested to join us often. Since students had many chances to observe through the telescope, they became quite conscious of the different moon phases and this facet was then discussed in the classroom as part of the general area of astronomy.

The particular topics which would suddenly arouse spirited discussion often came unexpectedly. For example, the matter of orientation arose during a discussion of the earth as a planet. What exactly determines where we think "up" is? -- How do plants know which way to grow? What do astronauts feel while in orbit? Our classroom sessions were conducted so that whatever topic happened to take hold -- that topic was, by definition, the subject material to be discussed. For this reason, although I had a general direction planned for each class meeting, the specific topics which were discussed were those which proved themselves on the spot...and thus could not be predicted before hand.

I also would like to describe three or four specific classroom sessions which I feel were definitely taking the class in the direction an UPWARD BOUND program should be heading. Early in the program a certain amount of background work was laid in the area of astronomy which of course stretched out in many directions. In particular the discussion finally got around to light: its speed, its frequency, and a few of its other well known properties, notably the property that often light appears to travel in perfectly straight lines. Explaining to the students that if they would look close enough, they could

find evidence that light also goes around corners, we concentrated on the many effects that can be explained by assuming that, except at a boundary between two different materials, light does indeed propagate in straight lines. Besides the properties of lenses and mirrors, and the interesting fish eye view of the world, I brought up the action of the pin-hole camera -- which is nothing more than a hole in a piece of paper with a screen or film placed behind the paper. Unless one is familiar with the result that a scale model image will appear on the screen behind the hole, the initial prediction usually is that it won't work. But to see the image, and to play with it, and then be able to explain it so simply, converted all the unbelievers. The focusing action of a hole in a piece of paper -- this can form the basic ingredient of a camera, a camera with no lens whatsoever. The students were quite intrigued by so simple an idea.

Being interested in light, the class discussions turned to the colors which we perceive and their relation to the frequency of the light. Such an excellent parallel exists with the phenomenon of sound that I related the frequency range of the light we can see to the spectrum of sound which we can hear, and then gave examples of sound with frequencies either above or below that which we can perceive. The natural extension was to question those frequencies of light both above and below the frequencies which are visible to us. They knew that dogs can hear higher sounds than we, but probably not that honey bees can <u>see</u> higher frequencies of light than humans. These higher frequencies being called ultraviolet or black light. Although we cannot <u>see</u> ultraviolet light, it has the marvelous property of producing fluorescence in many materials both organic and inorganic. Thus I built a couple of class meetings around this phenomenon. Since so many materials do fluoresce, it was not at all difficult to obtain a sizable demonstration. For the source of black light, I borrowed an ultraviolet lamp from the chemistry department. The possibilities of such a demonstration-lecture are quite obvious and are also too numerous to be completely detailed here. But we touched on the use of "optical bleaches" in detergents, fluorescent tracer materials in poisons, fluorescent paints, so-called invisible inks and some common uses in chemistry and microbiology. The ultraviolet lamps were small and easy to handle and naturally were shown on everything within reach. After realizing that one's fingernails, eyes and especially the teeth fluoresce under black light, but that skin does not, one student made the rather astute statement that if the sun gave mostly black light, then all of us would also be brothers in the eyes of man.

At another point in the summer program we turned to biology for a while. One reason was for a change of pace and the second to make use of the variety of trees which grow on the campus. We began in class by considering characteristics which can be used to identify trees and then went into detail on the use of the leaves. The first of two laboratories in this connection was used to give the students practice in actually classifying the leaf types. The students were sent out in groups of four, each group with a map of the campus covered with many numbers. The positions of these numbers marked the locations of trees whose leaf structure they were to check, and also the tree itself carried a slip of paper with the identifying number. The purpose of this lab session was to enable the student to clearly understand the classification of leaf types and not, at this point, to worry about the actual type of tree. My partner and I, and our two assistants then

visited the groups as they read their map around campus and made their decisions. The next day after correcting and discussing their group conclusions for each leaf type, I introduced the idea of a "key" for the trees -- in which a series of decisions, with which they now were familiar, could in conjunction with the key lead rather straightforwardly to the particular kind of tree under inspection. I then made up a key which included all the trees found on the campus plus some extraneous varieties to make the game more interesting. There is such a variety of trees on campus to choose from that there was no problem with a situation in which the students already knew many of the trees. During the next laboratory session they set out with the same groupings as before but with different maps and some 35 trees to identify. I had announced a prize for the two most successful groups of an evening away from the campus for a pizza dinner at my home. I was surprised at the interest which was aroused during this little contest and the fact that some were exposed to pizza for the first time in their lives was considered to be secondary.

There is one other session I would like to mention. During the trip to Washington, most of the students saw the Foucault pendulum which is swinging in the Museum of History and Technology Building at the Smithsonian Institute. Since none clearly understood its purpose we naturally got around to a thorough discussion of what it's all about. But before tackling this more complicated situation, we spent some time on the simple pendulum -- like the pendulum in a grandfather's clock which is essentially just a bob on a string. Now the simple pendulum is discussed in our text, but before even mentioning that, I used a class meeting for a purely empirical discovery session. A few students who came early to class helped me to carry some of the necessary materials: an electric timer, some string, numerous weights, scales and a ruler. Now the main quantity of interest about a simple pendulum is its period, that is, the time it takes the bob to swing out and to return again. We set out to discover just what about a pendulum determines this time. We listed the guesses: for example the weight of the bob, the length of the string, the length of arc, and others, and then systematically, through experiment, checked out the guesses. There was a variety of jobs which students were busy doing throughout this experiment: running the timer, counting the swings, weighing the many bobs, measuring the string, measuring the length of arc, and performing the necessary multiplication and division. The somewhat amazing result is that the only pertinent variable is the length of the string, and we ended with an explicit relation between the time of the period and the length of the string. Only then was the assignment made in the text. In this way I tried to relate to the text rather than allow it to be the complete guide. As an indication of our good work, I also pointed out in a standard physics text the identical relation which we had just discovered. (West Virginia State College, Institute, West Virginia)

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The Relevance of Excursions to the Learning Process: All of the excursions listed above could probably be justified on the basis of their cultural and educational merits alone. However, because these excursions naturally become the focus of the student's interest, we will use them as motivational tools to enlarge upon an immediate interest and lead the student to an awareness of

the total picture involved, embracing several disciplines. The student can now relate what he has learned to his own particular frame of reference.

By way of illustration: A tour of Chaco Canyon, with emphasis on Pueblo Bonito, has been scheduled for Saturday, July 15. These ruins of the Anasazi culture present an opportunity for imaginatively incorporating most of the academic disciplines into seminar discussions.

Social Studies: Perhaps the most obvious area of involvement is History. How and why did these people settle in the area? What was their political organization which made it possible to erect such a magnificent structure? Why did these people leave and where did they go?

Art: What esthetic values were being expressed in the Pueblo's design? How were they expressed? Were their art forms stylized? In what ways were they unique?

Geology: How has the geology of the area affected the Pueblo's design and construction? In what ways are these different from those seen at Aztec or Mesa Verde? What geologic features have changed since its original construction? Did these changes contribute to the exodus?

Biology: Of what did the flora and fauna of the region consist? How has it changed? Why? How did these natural regional food qualities affect settlement?

Chemistry: How was the age of these ruins determined? What is Carbon 14? What is Argon? How are these elements used in dating?

Physics: How were the lintels moved and placed? What physical laws are involved? How else might these massive stones be moved?

Math: How were the geometric proportions of the designs used at Pueblo Bonito determined? What instruments did they use in making these designs? How accurate were they? How else have the use and knowledge of mathematics been shown?

English and Speech: A play could be enacted depicting a crisis in these people's lives. The Literature section could be utilized for researching pertinent material. The play itself could be written in English classes. The Drama class would then be responsible for producing the play. (Fort Lewis College, Durango, Colorado)

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On Monday morning the students spent the first fifteen minutes filling out schedules for Monday and Tuesday. Again on Wednesday they scheduled Wednesday, Thursday, and Friday classes. They were furnished a program sheet for each day (the sheet for the Tuesday of the seventh week, chosen entirely at random, is given as a sample) and used a Daily Individual Schedule form.

This operation was conducted in consultation with the tutor-counselor, and each day's program was fitted to the student's state of progress in each of the activities in which he was participating.

7TH WEEK TUES.	LANG ARTS	MATH	ART	SCIENCE	MUSIC	IND ARTS	SOC STDS	GUIDANCE	SPECIAL EVENTS
8:30 9:00	Discussion: Lord of the Flies --- French I	Algebra --- Intro. to Geometry	Projects	Projects	Guitar Class III	Projects	The Tohapi Window --- Film: "Boundary Lines" Discussion	Student Counseling	
9:00 9:30	Disc. (cont) Lord of the Flies --- French II	Algebra --- Intro. to Geometry	Projects	Discussion: Jacob Stein, Psychologist	Drum Class II	Projects	The Tohapi Window --- Small group on Bertrand Russell	Student Counseling	7-10:00 Trip: Computer Room
9:45	Speech --- Journalism	Slide rule --- Mapping Functions		Projects	Guitar Class	Projects	Recording: "The Uses of History"	"Getting into College if you are Average" Film	7:30 PM C. Rapids Youth Symphony
10:15 10:45		Slide Rule --- Mapping Functions		Projects	Private Lesson: Student A Student B	Projects	Discussion: Mr.Dahlgren --- Project Review		
11:00 11:30	Rehearsal: "Madwoman" --- French II	Trip: Computer Room --- Problem Solving	Projects	Projects Discussion: Jacob Stein, Psychologist	Private Lesson: Student C --- Voice Class (girls)	Projects		Student Counseling	
1:00 1:30	Discussion: Farenheit 451	Pre-calculus --- Computer Programming	Projects	Projects	Chorus	Field Trip: Arts and Industries Building	Discussion: Shook-Up Generation	Film: "Getting into College if you Are Average"	
1:30 2:00	Disc: (cont) Farenheit 451 Rehearsal: "Desperate Hours"	Pre-calculus --- Beginners' Chess (lessons)	Projects	Projects	Private Lesson: Student D Student E		The Tohapi Window --- Discussion: Shook-Up Generation		
2:10 2:40	Disc: (cont) Farenheit 451 Rehearsal: "Our Town"	Topology --- Adv. Chess (lessons)	Projects	Projects	Organ	2:30 - 5:00 Process Pictures Photography Class	Disc: (cont) Shook-Up Generation	Student Counseling	

PHYSICAL EDUCATION AND INTRA-MURALS

UPWARD BOUND
State College of Iowa
Summer 1966

DAILY INDIVIDUAL SCHEDULE

Name _____ Date _____

Tutor-Counselor _____

Time	Area of Participation	Instructor
1. 8:30 - 9:00		
2. 9:00 - 9:30		
9:30 - 9:45	B R E A K	
3. 9:45 - 10:15		
4. 10:15 - 10:45		
10:45 - 11:00	B R E A K	
5. 11:00 - 11:30		
L U N C H		
6. 1:00 - 1:30		
7. 1:30 - 2:00		
2:00 - 2:10	B R E A K	
8. 2:10 - 2:40		
2:40 - 3:40	Physical Education	

(State College of Iowa, Cedar Falls, Iowa)

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An UPWARD BOUND TV Program: A television program, produced largely by a selected group of UPWARD BOUND students, during the last four weeks of the summer's program. At the moment, I have little, if any, feeling as to how the TV program will be structured. It is my hope it will develop out of the student's own suggestions and work.

Objectives: 1. To tell the story of the UPWARD BOUND program at SCSC by means of a television "documentary" which could be shown to any individual or group interested in the UPWARD BOUND concept and how it worked on one campus.

2. To afford UPWARD BOUND students the creative experience of helping to produce a television program.

3. To give individual UPWARD BOUND students responsible jobs to perform as part of a team effort.

There may well be other objectives, but I consider these of primary importance.

Basic Idea: The finished program, which could be made into a 16 mm sound film for showing almost anywhere, will be about UPWARD BOUND, what it is, what it means to those involved in the program. The TV program should be pretty much the brainwork of the student participants, with proper professional guidance, of course.

The program need not be highly polished; rather, students should be involved in its planning, scripting, performing and production aspects to the extent that they can rightfully call it their own creation. To achieve this goal with a bunch of inexperienced youngsters will call for a somewhat rigorous devotion to "the cause" on their parts. I am asking you to help identify individuals who appear to have this quality.

Training Session: Every Monday, Tuesday and Thursday between July 18 and August 12 from 1 to 4 P.M., the TV group will meet in the TV studio. The students first will be introduced to television fundamentals in programming and production through a short, intensive course. They will learn the operation of certain TV equipment.

During the second phase of the training session, the group will work as a team on the planning and production of the TV program. Work assignments outside of group meetings will be given to some students. The entire operation can be a very fascinating experience, but will require dedicated effort on the part of every participant.

Jobs to be Filled: Approximately 10 to 12 positions should be filled, with individual selections made by the UPWARD BOUND staff. Students who follow directions, show initiative, and can contribute to a cooperative team project are preferred. At least half the group should be boys, since a number of the jobs occasionally demand extra manual strength.

Although the following job descriptions are quite skimpy, they may aid you in matching a particular student to a position.

Assistant Producer - a student of above-average maturity and intelligence who has the respect of his fellows. This person would be my key man in helping to organize the group and keep things moving. Requires imagination, careful attention to details, persistence, ability to supervise. If such a person cannot be identified, I would rather not fill this position.

Writer - (2) - key positions to help create and coordinate major segments of the program script, including research, writing (and typing, if possible). Imagination and the ability to write clearly, concisely, and correctly are necessary.

Floor Director - the Program Director's right-hand man in the studio during production. Involves a good deal of legwork, quick coordination, and a responsible "take-charge" attitude. (It is conceivable that the Assistant Producer above could also function in this position.)

Cameraman - (2) - requires ability to follow rapid instructions, good motor coordination, height of at least 5'9". Developed pictorial sense would be helpful.

Audio man - involves high degree of motor coordination, good timing sense, ability to follow tight schedule of directions.

Technical Director - demands quick response to verbal instructions, manual dexterity, constant concentration.

Photographer (1 or 2) - requires developed pictorial sense, legwork, ability to carry out assignment without supervision. Experience in taking 35 mm slides and 16 mm movies desirable.

Artist - requires creative skill in hand lettering, sketching, layout and design.

Announcer (1 or 2) - requires pleasant voice, good diction, ability to read script under pressure with natural expression, clarity, minimum of mistakes.

Talent-number varies according to format. Persons with speaking parts on-camera should have good stage presence, ability to communicate verbally, either from outline or extemporaneously. Talent need not be part of basic TV group to be selected.

Please do not misunderstand my reason for listing the above descriptions; they are intended only as a guide for your selection of individual students. I certainly do not expect that an inexperienced high school student would meet the full list of qualifications given for some of these jobs. However, I do suspect that there probably are a dozen or so of the UPWARD BOUND students who have the "moxie" and innate ability to bring off this project rather successfully. I will very much appreciate your help in identifying prime candidates for these jobs. No later than the July 12 staff meeting, I hope we can review and pass on your recommendations. (Southern Colorado State College, Pueblo, Colorado)

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Four courses, a student enrolled in only one of the four for a six weeks summer session. Movies used on almost a daily basis; library work and extra readings, field work, laboratory work. All courses taught by discussion method in an attempt to elicit response from the students involved. Some courses are almost on a seminar basis.

The teachers are responsible for their own scheduling. Their program is only tied to three meals a day, the athletic program in the afternoon, and bedtime. Students are in classes, doing work in the field, or observing movies anytime from eight in the morning to ten at night. The programs by their nature were interdisciplinary. The humanities incorporated art, music, and literature. Ecology incorporated biology and geology. The Nature of Man incorporated introduction to psychology, religion, and anthropology. The political science section covered history and literature.

The relation of the community was limited to political science group which made a couple of studies of some local industry and its effect upon the economic welfare of the Mercersburg community, on air and stream polution, and on racial makeup of the employees.

All four courses took numerous trips off campus during the summer session with the ecology group spending one week on Presque Isle in Lake Erie attempting to apply the knowledge they had learned here this summer to a new situation. During the follow-up, tutoring is going on involving the summer students here. (Mercersburg Academy, Mercersburg, Pennsylvania)

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The "Presentations" Program: The "Presentations" given by the students in the Swarthmore UPWARD BOUND summer program 1966 were short three to five minute talks. Each student chose his own subject, and with the advice of a counselor found material, organized it, gave a speech, to an audience of fellow students and counselors, and submitted to questions and criticism about content and manner of presentation. During the summer, each student gave two presentations, one in the fourth week and one in the seventh (last) week.

In the previous summer, each student gave one talk near the end of the program. The counselors found that there were many weak points in almost every speech, but had no opportunity for allowing the students to apply the suggestions they received. With the two sets of talks scheduled last summer, the students were able to gain ease and ability in handling the situation, and the counselors were able to find out the students' weaknesses, work with them, and observe changes.

Some of the problems most frequently observed in the early talks were: complete plagiarism of texts, frequently containing words and ideas which the student did not understand, inability to organize information and stick to the chosen subject, fear of speaking before an audience (although all students gave speeches the second time around), lack of conscientious preparation, and inability to answer questions requiring extrapolation beyond the talk itself. The value of the comments given immediately after the speech, later suggestions by the counselors, and the chance to hear both good and bad speeches by fellow students was tested in the second batch of presentations. They showed great improvement; most of them were longer, and the students were more willing to use their own ideas to answer questions.

The counselors decided to award book prizes to the students who gave the best speeches, to reinforce the students' feelings that they had done well in handling an academic job. The winners were given their choice of any book (within reason). The number of awards was increased from ten given for the first round of presentations to seventeen for the second because of the marked improvement in so many of the speeches. One student who had not given a presentation the first time because of serious reading and academic difficulties and personal hostility toward the other students, compiled a report on "Underwater Signals" (in SCUBA diving) and presented it exceptionally well. This, along with other events during the program, built up his self-confidence and influenced his attitude toward himself and other students. (Swarthmore College, Swarthmore, Pennsylvania)

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TEACHING WRITING

The major and primary problem faced by all writers is the requirement of having something they want to say and expressing it as honestly and naturally as possible. After that problem comes all of the other parts -- the tone, sentence structure, grammar and mechanics, neatness, spelling, etc.

Too often English teachers interfere with the student's attempts to improve his writing. They assign topics in which the students may have no real interest. They then mark all of the errors on the paper in spite of the fact that the paper may have only one major error -- it simply isn't an honest attempt to say anything. A student paper that is "dead" -- filled with vague generalizations saying nothing -- need not be marked for poor grammar or incorrect spelling, since what the paper contains isn't worth being correct nor even worth reading.

I would suggest that in order to concentrate on the primary problem of writing we teachers make this our major focus at least in the beginning of a course on writing. We can do this by asking the students to write only when they are involved in a particular topic or problem and want to say something about it. Sometimes a heated and exciting discussion occurs toward the end of a class and there isn't enough time for everyone to make a comment. This would seem an appropriate time to ask the students to write a brief (one page) statement expressing their opinion.

There is a particular value in insisting at least in the beginning weeks, perhaps throughout the summer, on brief papers. This places the focus for student and teacher on the quality of the writing; that is, on making each word work to say something worthwhile. It prevents the students from filling up space on a page, from merely fulfilling an assignment.

When the students' papers are turned in, the teacher might concentrate only on the quality of what is expressed regardless of grammatical or mechanical errors. Read aloud those papers which succeed in expressing adequately a point of view. Read aloud those papers which don't say anything at all. Cross out all words that do not work, words that are vague and general.

Perhaps it would also help to discuss a weak paper in class, not only having students point out which words do not say anything, but asking them to supply the kind of details that would say something.

The aim in all of this early work would be to demonstrate to the students that they do have something to say when they write on topics they are concerned about, especially when they have strong feelings about a topic. It gives the students an opportunity to feel free from the customary restrictions of grammar and mechanics, free at least long enough to succeed in developing the primary job of writing.

Some English teachers in elementary school, high school and college seem to feel that it is their duty to mark all errors on all papers as if refraining from doing this would result in what -- in contributing to

delinquency or the increase of sin? Could we English teachers not provide the students with a laboratory where they might experiment and learn, where they might make some errors or many without penalty, where they might learn step by step including the most important step which is too often overlooked entirely. Artists work in a studio which is seldom neat and in which they make a lot of errors as they create. Shouldn't students have the opportunity in writing first to create and later to refine and polish?

I think that when students do have the opportunity to focus on using words well to say something they care about saying they unconsciously improve their grammar and mechanics to some extent. I think that many errors are caused by the student's lack of interest in the assignment itself. Furthermore, once the student has succeeded in saying something well, if only a brief paper, he is more interested then in the refinements that are necessary. He has something which he created that is good, that is worth refining.

The UPWARD BOUND experience in writing in summer or in academic year need not be another high school or college course, nor need it attempt to do everything at once, to cover all of the problems involved in writing well. The UPWARD BOUND course might well focus on what is customarily not included in writing courses.

Most writing courses tend to follow a pattern of moving from the smallest particular toward the whole; that is, from nouns and verbs to phrases to sentences to paragraphs to whole essays. The assumption here is that if each of the parts is studied the whole is eventually arrived at. My own impression is that it ought to be the other way around, beginning with writing itself, with some expression of a topic or idea, and moving then from let us say a brief essay back toward the various smaller parts. None of us can write by any other method than by starting with a need or desire to write about something, and I think students ought to be allowed to follow this more natural progression too.

I think it would be more successful were we to be positive in our approach, not to focus on what students cannot do but to aim at helping them to discover what they can do with language. I think that once a student discovers he has written something that works, that others respond to, whether it be a phrase, a sentence, a whole piece, or a good metaphor, he is inclined to view the problem of writing differently. If nothing else is accomplished except for the students to feel that they can write, a great deal has thus been accomplished. In UPWARD BOUND the opportunity is there and the restrictions are fewer.

Robert Christin
Educational Projects, Inc.

" . . . in the teaching of literacy, as in the teaching of all other skills, the student's desire to learn makes learning probable."

-- Daniel N. Fader: Hooked on Books

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" . . . no one taught them in a way which was consistent with how they learned everything else in life."

-- Edward T. Hall: The Silent Language

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"The first object of any act of learning, over and beyond the pleasure it may give us, is that it should serve us in the future. Learning should not only take us somewhere; it should allow us later to go further more easily. . . . The best way to create interest in a subject is to render it worth knowing, which means to make the knowledge gained usable in one's thinking beyond the situation in which the learning occurred."

-- Jerome Bruner: The Process of Education