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ABSTRACT

Implementation of the Integrated Career Development Curriculum (ICDC) in Meeker, Colorado schools is described in this report. The main section of the report contains a historical description of implementation, a description of obstacles, a description of successes, and recommendations for improved implementation. Attachments contain a report on promising career education practices in small schools; a descriptive brochure of Education 233, a course offered by Western State College; an example of a teacher's course evaluation; a review of the course by a teacher-administrator; a principal's evaluation; ICDC implementation case studies of an individual teacher; sample teacher devised units; and illustrations of other ICDC uses. (PS)

MEEKER SCHOOLS ICDC* IMPLEMENTATION CASE STUDY

Meeker, Colorado June 30, 1973

I. HISTORICAL DESCRIPTION OF IMPLEMENTATION

The Meeker Community has for many decades shared with most other rural communities the strong emphasis (perhaps overemphasis) on a basically college prep curriculum in its high school with several notable exceptions. These included a growing interest in vocational preparation as exemplified in a vocational agriculture program (enrolling over 70% of high school boys) and an office occupations program (enrolling over 70% of the students). Also, a strong staff interest in individualized learning, use of technology, and scheduling modifications was either tolerated or actively supported. Encouragement and support for these activities were obtained through the school's association with the Rocky Mountain Area Project and its successor the Western States Small School Project.

Meeker piloted an effort towards using local businesses for job experiences, called Vocational Exploration (See Attachment A), in the mid 1960's. This pilot effort (which is still in existence, serving 40 high school students annually) was used to justify to the Ford Foundation the Career Selection Program of WSSSP** which Meeker participated in. This effort in turn led to the identification of the special needs and circumstances existing in rural schools which suggested the ICDC project. The Meeker administrators were aware of and had some input into the writing of the ICDC proposal. Also, two Meeker high school teachers, Mr. Charles Jaquette and Mr. Don Blanke were on the team of ICDC writers that worked during the summer of 1969 in Salt Lake City, Utah.

COMMITMENT AND INVOLVEMENT

During the past 10 years, Meeker has had the same superintendent and two high school principals, all of whom were made aware at various WSSSP meetings and workshops of the progress of the ICDC. Thus there has been a continuing administrative commitment. The Board of Education has been informed all along on such progress and has been consistent in support, feeling that ICDC addressed itself to a recognized need in our school. The minor budget amounts necessary to support the program have been willingly provided.

Faculty commitment to ICDC implementation has varied from indifference to full dedication, with at least half of the staff being involved in the development of the ICDC over a several year period. Skepticism has been exhibited by many of the staff but this has been softened somewhat by reasonable tolerance and most have been intrigued with at least some aspects of the curriculum.

*Integrated Career Development Curriculum
**Western States Small Schools Project

The community has been aware and supportive of our interest in career education but have only been indirectly involved with the ICDC efforts through their children or word of mouth. Very little direct effort has been made to involve them. But they have supported and provided the work stations for our Vocational Exploration program, have supported school budgets which include sizeable outlays for secondary vocational courses, and have tolerated a considerable degree of experimental efforts in the local schools-though at some times with extreme dubiousness on the parts of a few people.

Two local efforts have indicated the community's recognition of career education needs. One was their support several years ago of an area vocational school proposal (which subsequently failed because the nearby community where the school was to be located failed in a bond issue vote for the local share of funds needed to erect buildings). The other instance is the local Accountability-Contract Accreditation Committee's authenticating through an opinionnaire the addition of a "Career Education" goal to the list of goals for the local school system.

MATCHING ICDC AND SCHOOL NEEDS

The ICDC was designed to meet the needs of rural youth and small rural schools as recognized by staffs of such schools and state project directors who had been working with such schools. Since Meeker was one of these schools it is natural that there seemed to be an excellent match between ICDC objectives, concepts, materials and the local need. We too had the restricted curriculum, the outmigration of graduates, the large proportion entering compared to the small percentage completing college, the low pupil-teacher ratio correlated with the high per pupil costs, all typical of small rural western schools. A school survey made of graduates from 1956-1965 revealed the vast range of jobs in which ex-students were now engaged with no more than one or two areas being represented by more than 4 people from the 10 graduating classes, according to the approximately 250 questionnaires returned. To provide specific vocational training for even part of these many specific jobs would be financially and logistically impossible. Since the attempt for an area vocational school had failed, no answers to the needs were possible in this direction. It is interesting to note that most, if not all, staff members (even in cases where they are extremely critical of specific ICDC materials) are generally supportive of the concepts of the ICDC.

SCHOOL POLICIES

No change in school policy was needed since there has been rather longstanding policy on the part of the Board and Administration allowing individual teachers freedom to choose curriculum materials and methods of instruction and to support them in their choices with the necessary facilities and resources.

Reasonable experimentation has been encouraged as has individualization of instruction and a wide use of community resources. Flexible scheduling and crediting arrangements, both conducive to ICDC implementation, have been in existence for a number of years in our high school. If the above had not been so, it would have been advisable to have sought a waiver of any restrictive policy or practice which might impede the tryout or implementation of the ICDC.

STORAGE OF MATERIALS

The original material came in boxes and nothing was coded. Three teachers spread the materials all over one classroom and proceeded to code the units. These materials were then stored in boxes until time for review by the teachers and then they were placed on individual desks for review.

With the shipment of the next materials, we were also sent an index and coding numbers for the units.

We then took the original shipment of materials and recoded the units using the index sheet.

These units were placed in file folders with the code number on each folder for reference and easy handling. These were then put into three boxes and stored on a table in an unused office. The Basic Technology units were placed on three shelves with index cards between each set of units.

We then made a chart for the teachers to record the units that they had taken out so that we could keep track of the units.

Two master sets of the ICDC units were saved, one for easy scanning by teachers, which was placed in the unused office, and one was placed in the Superintendent's office for a security copy to make duplicates from if all other copies were used or lost.

INSERVICE TRAINING ACTIVITIES

Following the selection of Meeker as one of four Colorado school districts to participate in the ICDC program, a planned schedule of in-service became a necessity. During the summer of 1969 Don Blanke, Meeker Counselor, was employed to investigate world of work and career guidance deficiences so that materials could be developed to allow rural youth the same advantages as their urban counterparts. In February, 1971, an implementation meeting was held to orient the schools to the materials available. An indepth workshop was held in Durango, Colorado, in August 1971 for two representatives of Meeker. Community orientation, implementation design, faculty implementation, and a record keeping system were developed.

In January 1972 a small group met in Las Vegas to provide feedback on problems concerning the materials. A $100 honorarium was offered for teachers who developed carrier projects based on the ICDC materials. Project school teachers were invited to develop them. The materials were revised and coded during the summer of 1972. A conference was called for August, 1972, to review these materials.

Because of money limitations one school district in each state was selected to continue testing the ICDC materials and implementing them into the present curriculum. Meeker received the endorsement of the WSSSP board.

Since the selection of Meeker the following inservice has been conducted:
The plan for 1972-73 was to develop a college credit inservice course to provide added incentive to all staff members. Twenty-eight faculty members registered for the class. Several were elementary personnel who were interested in the carrier project approach to learning. The requirements for the class were:

1. Participants were to review at least 10 units in each domain, Basic Technology, Society and Work, and Career Guidance, and were asked to keep notes from the reviews as to potential uses, strengths, difficulties, etc.

2. Participants were to select units or carrier projects that could be used in their classrooms as they were written or modify present units for such use, or to create new units or carrier projects for classroom use.

3. Participants were to try the materials selected (or modified or created) in the classroom and report results (negative or positive).

Outside consultants were invited into the school district for presentations on various aspects of career development. Examples were Dr. Robert Taylor, Mr. Harrell Guard, Dr. Ed Moe, Dr. Robert Whittemore, Dr. Chet Hauskins, Dr. Henry Isaacson, Dr. Rodney Anderson and Mr. Herb Steffens.

A notebook was developed providing evidence of work done by each class participant. It is on file at the WSSSP Project headquarters in Carson City. The general consensus of the ICDC inservice training was that it was the most effective factor in promoting use of the ICDC materials by the Meeker faculty.

(Attachments B - Descriptive Brochure of Education 233, and C - Example of Teacher's Course Evaluation, Time Log, and Materials Review, and D - Review of Life Involvement Model Class Education 233 by an Administrator-Teacher and E - A Principal's Evaluation of ED 233 are

included at the end of this study as specific illustrations of this inservice class.)

Many of our teachers had used individualization techniques for years, having developed individual learning package type materials for their classes, or having used linear type individualization where students perform learning tasks at their individual rates. Because of these factors, no special inservice was given for the supporting consultant teacher role required when ICDC units are performed by single students or small groups. Throughout, the project had emphasized the necessity for this type of role in written materials and in various meetings. Had we not had this background it would have been mandatory to provide inservice on this type operation, and it would probably have been better for our newer teachers if we had gone ahead with such training.

It should be mentioned that most of our students were familiar with individualization, having been exposed to much of this type learning in our elementary and junior high schools.

COURSE ORGANIZATION

One of the first class utilizations of ICDC materials was in a mechanical drawing class with selected students using some of the Basic Technology drawing units. These were used as supplemental material to the regular curriculum.

Many of the units from all of the domains were used in several English classes. These units were used in such a way as to increase skills in the regular English curriculum (punctuation, spelling, communication, etc.) but also were used as a tool to increase knowledge about careers, society, and how to get where they want to go. In one of these English classes the teacher produced materials that fit the ICDC model that brought tremendous learning and self confidence (increased self-image). This teacher-made unit was on T.V. commercials in which technology and communications were both used very effectively. (See Attachment F for a further discussion of this teacher's experience with ICDC.)

The commercial teacher used units on telephone answering, appearance, job applications, etc., in her steno training course and also, she recorded units on life styles on her steno dictation machines to provide interesting and informative material for students to practice on. A vast area was opened with this approach. (See Attachment G).

In eighth grade English the teacher had students apply for Social Security Cards (ICDC format) in order to fill out job applications which were all prerequisites to a research paper on Careers, which also utilized other units.

A high school physics substituted all of the Basic Technology units on electronics for the standard unit on electricity.

The driver education instructor developed units on mortgages, loans and interest rates as applied to the purchase of an automobile or motorcycle, and also used the units on sales and selling. The instructor also suggested use of LIM and ICDC type units for driving laws and do's and don't's on driving. (Samples are included in Attachment H).

A human relations class used units in life styles, communities and several others that involved society. These were implemented in small group discussions. One of the instructors created a unit on "Community Leadership" especially for this class. (See Attachment I).

The biology teacher developed a unit on range management along with teaching fauna-flora and ecology. (See Attachment L).

Using the ICDC Carrier Project as a model, the art teacher set up hypothetical situations where the students were told a customer wanted a specified type sculpture, charcoal, oil, or sign and the student was given a contract stating this would be done to the satisfaction of the customer and within a specified time. Some of those objects were actually sold. (See Attachment J).

A substitute and a tutor found these very effective to give students for short periods and still give a complete learning concept.

In a discipline case the principal gave ICDC units to a student who was not doing well in class and put him on his own (under his supervision) and gave the student credit on the time and work produced from these units. (See Attachment K).

Business math used units in conjunction with text book units on consumer related topics.

Besides the foregoing instances of integrating ICDC units in regular classes and using these for independent study, it is planned in the future to use them in three additional ways:

1. As a supplement to our Vocational Exploration Program - students enrolled in Vocational Exploration (about 40) will be tested on units considered essential in their particular job experience (such as General Work Habits, Job Interview, units from Numerical and Human Relations areas) and will be asked to master those units not passed, concurrently with their job experience; if areas of weakness are pointed out by the employer-supervisor or the school supervisor, students will be directed to complete appropriate units for remediation.

2. Mini-courses - our present high school modular scheduling permits us to experiment with certain segments of the materials in a mini-course (less than the full-year solid course) structure. We intend to select at least one segment of the materials and try this out on an experimental basis next year.

3. In the Guidance Program - the guidance counselor, Mr. Don Blanke, has access to all of the materials and may suggest and/or assign certain ones to individual students as he uncovers needs and aspirations of the students. At times this will be done in conjunction with the student's regular classes and teachers, at times it will be independent of them, depending on the circumstances.

NUMBER OF STUDENTS INVOLVED

From the reports turned in by the teachers it appears that at least 80% of the 220 high school students and 100% of the eighth grade students had contact with at least one ICDC unit or carrier project. Some of the students covered a number of units in one specific area, such as electronics, machines, or work habits; some worked under different teachers in several areas, and a number may have only worked through one specific unit. It would seem reasonable to estimate that the amount of time each student participated in ICDC activities varied from less than one hour to a high of perhaps 100 hours during the 1972-73 school year.

SPACE REQUIREMENTS

The ICDC curriculum space requirements have not been difficult in our school. An already existent middle office between the principal's office and the high school outer office provided room for central storage of ICDC units. This took about 15 feet of shelf space for the vertical filing of the multiple copies (10 each) of the Basic Technology units and one-half desk top for the three 16 inch cardboard box files for one copy of each of the Basic Technology units and multiple copies of carrier projects and units in the other two domains, Society and Work and Career Guidance.

In classrooms the teachers used desk tops, table tops, filing cabinets, notebooks, window ledges, and other available areas for storage and display of the materials. Cardboard box files seem to be a good method for vertical storage where they are accessible to students as well as teachers.

TIME REQUIREMENTS

The major time problem was that presented to teachers - time to look at, review, choose, make available (modify if necessary) and to arrange for necessary equipment and materials for ICDC use, while maintaining

their regular programs and assignments. High school teachers' involvements with extra-duty assignments (band, athletics, annual, speech, dramatics, etc.) is a serious problem to the implementation of new classroom activities and materials. Released time through use of substitutes paid for by the school was offered teachers, but was not utilized. Teachers either hated to give up their classes and activities or dreaded the extra lesson planning this would involve. Thus most of the teacher time was literally out-of-their-hides or it replaced other lesson planning. Many teachers were partially compensated for this time by receiving college credit through the inservice course previously mentioned.

Student time was generally no problem since in most cases the ICDC units replaced other activities in regular classes. Some worked outside classes, using independent study time under the modular schedule or as part of their homework.

SCHEDULING

Meeker High School uses modular scheduling along with allowing the teachers a wide latitude in choosing and selecting curriculum materials. This type curriculum lends itself to individualized instruction.

If a teacher is interested in using ICDC materials he can use this type of curriculum materials as supplemental work, optional work, individualized work, or the total class can use these materials as the core of the curriculum.

Modular scheduling makes it possible for teachers to select the daily and weekly blocks they deem necessary for their teaching methods and curriculum content.

Classes are constructed from twenty minute time modules, which makes possible time blocks of 40, 60, 80, 100, etc. minutes. A significant amount of non-scheduled time (averaging between 30 and 40%) is available to each student and can be utilized for lab work, study for regular classes, or for doing independent study projects such as the ICDC curriculum provides.

GRADING AND CREDITING

Meeker has a semester hour crediting system in which 10 semester hours (the amount given for a typical year-long course meeting 200 minutes weekly in non-lab courses and 280 minutes in lab courses) is equivalent to 1 Carnegie Unit. Thus for every 12 clock hours (16.8 in lab courses) one semester hour can be awarded for satisfactory work.

This lends itself to several adaptations:

1. Giving credit for time in short courses or units (pro-rate the credit).

2. If the quality of work by a slow student is good the teacher has the option of cutting the credit if the student has not covered enough material, but still giving a passing grade. (This should help the slower student's self-image.)

3. In a modular scheduling type situation the students' unscheduled time can be utilized for short, individualized learning projects, providing opportunity for supplemental learning or make-up credit toward graduation.

4. The student who is not interested in grade point averages or is afraid his/her grade point average may suffer from taking a certain class has the opportunity to take the course on a Pass-Fail basis or, if credit is no problem, on a No Credit Desired basis. The ICDC units could be of value for this type of student who wants only to increase his competencies in an area in a relaxed way.

EVALUATION

Several hundred student evaluations were received in all three domains; Basic Technology, Society and Work, and Career Guidance. A complete range of evaluations was received,such as: "too personal", "great", "could not understand", "really turned on by materials", "I knew all the answers", "too long", "not enough activity", "I learned a lot", etc.

All of the teachers who participated in the inservice class provided evaluations. In only one case did the teachers feel the materials could not be used as an integral part of their classes. Nearly all of the high school staff became involved in the ICDC program. There was expression made that many units or carrier projects can be used in every classroom. Many teachers made the statement, "I wish I had taken the time to examine the materials sooner in the year."

Most of the teachers took the basic materials and revised them to meet their needs. Subjective evaluations by the teachers and administrators have been a continuous process. The general feeling is that the units and carrier projects will be used in greater depth next year.

Specific evaluations of the units are available in the Western States Small Schools Project office in Carson City. Project pre-and post-testing will be reported by Dr. Robert Whittemore, Project Evaluator.

IMPLEMENTATION COSTS

Meeker schools devoted quite a bit of time to implementation of ICDC (really only partially begun) but very little in financial resources as

these were not called for The Project provided most of the inservice training for administrators and key staff members through conferences, meetings, and consultation by Project staff members and State WSSSP directors.

The Project provided all materials except for the few cases where more than 10 copies of certain units were needed for use by whole classes. The material was non-consummable and expectation of approximately 10 uses for each unit might be made. Extra copies cost just a little over two cents per page using our electro-static copier. Present reference materials were utilized where indicated.

The only equipment outlay was $44 worth of small testing equipment for use with the electricity units by physics students.

No staffing was added. Present staff members - administrators, teachers, counselors-took on the tryout and implementation of ICDC as a part of their general obligation to improve learning opportunities for our students.

Beyond this the Project provided us, as one of the demonstration schools, $2000 for implementation during the final year of the Project. This was utilized primarily to subsidize the college credit course for 28 members in the Life Involvement Model (ICDC for secondary, SPURS materials for elementary). It provided two-thirds of the tuition costs, notebooks and supplementary materials for participants, consultant costs, and reimbursement for teachers for time used documenting their experience in use of ICDC and planning and creating ICDC units needed but not produced by the Project, and for clerical expense in organizing and filing ICDC materials. Provision for released time for teachers was made but not utilized.

It would be safe to state that our experience indicates that implementation of ICDC is not a costly operation in terms of money but largely involves the redirection of present resources. Extra clerical costs ($100 - $200 estimated) should be expected.

OUTCOMES

The outcomes of our ICDC implementation efforts have been highly variable in nature, quantity. and quality according to student, teacher, administrator, class where implemented, and specific unit or carrier project covered. Students throughout have asked for more interaction with real things as opposed to reading and talking about them, thus supporting Woodruff's contention that the curriculum should be phenomenalized.

An interest has been created or enhanced on the part of staff members and administrators in the ICDC, in career education, in the Life Involvement Model, and in individualization. This has been expressed as an

intention to further tryout the materials, to create similar materials, or to improve existent materials; a desire for more and better materials to be developed by an outside source; and a desire for more imaginative carrier projects to motivate the present materials.

The materials have established themselves as valid vehicles to individualize instruction even though improvement in them is desired to make this more easily accomplished.

It is felt that a result of the use of the materials by students has been to increase their awareness, knowledge, and skills in the career area, enough to justify the student and staff effort expended and has thus enhanced their career opportunities. This probably varies from very slight to significant in individual cases and may or may not be sufficient overall to show up on the Project post-test results.

One outcome, which may prove very significant, is the tentative decision to use the framework of learner objectives developed for ICDC in the twin processes of "Accountability" (mandated by the state legislature) and "Contract Accreditation", an innovative program pioneered by the Colorado Department of Education.

II. DESCRIPTION OF OBSTACLES

RESISTANCE TO CHANGE

Perhaps the greatest obstacle faced in implementing ICDC in Meeker has been the seemingly human and institutional characteristic of resistance to change, which is particularly strong when the impetus, enticement, or encouragement comes largely or partly from an outside force. Since our school had already changed a considerable amount in the past dozen years and had a good image both in our own eyes and in the minds of many people in education, it may have been difficult for us, as a total staff and for individual teachers, to recognize areas of needed improvement. The amount of time, effort, and frustration this recognition (and the decision to do something about it) entails keeps many of us in education in our accustomed paths and we in Meeker are no exception. The realistic notion that change can mean worse instead of better, particularly in the early developmental stages of any change effort, is also a major factor to take into account. Teachers do develop (as they have to) strong defensive mechanisms against administrative pressures or encouragements to change.

TIME

Time, or more accurately the "lack of time", was the next greatest obstacle we faced in implementing ICDC. A staff of teachers and administrators, busy with the regular ongoing curricular and cocurricular activities of the typical rural school, are always faced with a number of tasks that they should be doing, or should have done, without taking on anything more. Most rural teachers either face a near full time job as homemakers, or are working at another job to supplement their income, or are building or remodeling their own homes. Injected into this busy picture comes the challenge to spend the amount of time and mental energy necessary to review a new curricular concept such as ICDC to become familiar with its assumptions, goals, concepts, materials and methods; and to arrive at a decision on whether or how much of it to tryout and/or institutionalize. Evaluation of such implementation also usually entails much more time and effort.

A few minimum days helped a small amount as did the use of pre-school workshop time. Paid-for substitutes were offered but not used. We will continue these methods next year but are sure that time will continue as one of our prime enemies in further implementation.

GETTING MATERIALS

One of the more serious obstacles was concerned with the slowness of getting units and carrier projects to Meeker. Over two years went by before materials were available in Career Guidance and Society and Work. Many teachers became discouraged because the topic names were available to the schools but the units were not written. Materials were uncoded or a system for coding was unavailable.

ORGANIZING MATERIALS

Getting the various boxes (in multiple shipments) of materials unpacked, spread out, and attempting to organize them was quite a problem, partly caused by not having the coding system beforehand. Not knowing how many total there would be or how much space would be required enhanced the problem as did the question of where they should be stored for greatest seeability and useability.

After they were coded, filed, and stored we had a further problem of keeping them (or at least one copy of each), as teachers would take out all 10 copies for class groups and then they might be missplaced or students would fail to return them. Only 10 copies of each presented a problem in this way - one which will be greater next year as we continue to use them and the project will produce no more. We are considering possible purchase of an electronic stencil maker to help with this problem and for many more such uses in our district. We did use an electro-static photocopier which sufficed for the few times extra copies were needed, but this would not be as satisfactory an arrangement if larger numbers of copies are desired.

The loose-leaf or stapled single copy method for each unit of curriculum materials has the inbuilt advantages of flexibility in selection and use (enhancing individualization) plus the revision and substitution capability which is very important in a new unproved curriculum. However it at the same time creates serious problems: (1) It is extremely difficult for teachers (or students) to scan the whole curriculum to get a view of the total scope; (2) It is harder to see how the various elements relate to each other; (3) Individual units can be lost or missplaced; and (4) Shelving or storage space is increased: and (5) Inventoring is extremely difficult.

GETTING STAFF TO USE MATERIALS

Even though the materials were available there was some difficulty in getting teachers to use them. The following are reasons:

1. Extremely busy teachers.
2. Materials not in each classroom.
3. Curriculum already filled without using ICDC materials.
4. Materials were checked out by one teacher but needed by others.
5. Teachers were not aware of ICDC content, therefore it was not used.
6. Materials were not attractive.
7. Need for more activity (not book work) was expressed by teachers as well as students.

QUALITY OF MATERIALS

To be a valuable part of the high school curriculum these units and carrier projects should have been saleable items, not only to the teacher and school, but to the learner. The units as they are now printed are not commercially feasible and therefore will probably never be distributed widely enough to provide a learning situation for many students.

In general the materials lacked the illustrations (drawings or comic), color, and variety in design and format which would have made them more attractive to learners. And they lacked variety and imagination in the suggested activities section. In some cases students felt that the language used was too simple and boring, while in other cases some felt the wording was too difficult for them.

MATERIALS NOT FULLY STUDENT MANAGEABLE

Many students were not able to manage the units or carrier projects because some of the language was beyond their comprehension. Sometimes the units required films, etc., which were not available unless the teacher ordered them in advance. Many students desired to have contact with the real phenomenon rather than a written page. At other times equipment was not available to perform the required activities.

In most cases the units were not successful when a teacher did not or was not able to provide assistance over hurdles.

GRADING AND CREDITING

Under a Carnegie unit crediting and traditional grading system the ICDC units would present a problem because of their shortness which might not cover the required time for crediting.

Some teachers and administrators will probably raise some of the following questions in regard to grading and crediting.

1. How can you credit such short units?
2. Can I grade on these units in the same manner under the traditional system?
3. Do you grade the same if the student passes the pre-test or post-test or give more credit if he goes through the unit and passes the post-test? (Basic Technology)
4. How do you grade or credit an interview or discussion (Society and Work, and Guidance units)
5. If all students don't do the same units, how can I compare (test) and grade on this basis?

Since Meeker teachers had encountered these problems previously in their experimental efforts in individualization, the above obstacles did not seriously impede their use of ICDC materials.

The invention or adaptation of grading systems to fit the learning situation was an old story to most of them. It took some thought and work but it could be done.

The flexible semester hour system already existing facilitated crediting problems.

III. SUCCESSES

STUDENT SUCCESSES

Most of the student successes are based upon individual ICDC units and not carrier projects. Most of the Meeker faculty were not mentally prepared to proceed into the complexities of the carrier projects without first getting the feel, security and assurance of success that would result if use of the units proved effective.

The majority of student comments were very positive about the usefulness of the units. The following quoted comments were taken from student evaluations from given units and are only a sampling from the many student evaluations.

Society and Work, Career Guidance, and Basic Technology units are all represented in the following student comments.

Slow Student - "Relevant to the class I am now taking"
Good Student - "I enjoyed this unit, I applied what I learned later in my typing class."
"Easy to understand"
Poor Student - "They explained each of the objects very good"
"This book was very educational" "Good"
Average Student - "It was a very fast way to learn about antennas"
Good Student - "Excellently put together formulas were relatively easy to understand"
Good Student - "A very useful unit to help me understand electricity"
Poor Student - "This unit was great and should not be changed"
Poor Student - "It was short, but it thoroughly explained what a relay was and I liked it"
Good Student - "Was fairly easy. Things associated with everyday living"
Good Electronics Student - "Good, solid, basic electronics"
Average Student - "Easy unit, very helpful for experience in soldering or welding"
Very Withdrawn Student from broken home, mother suicide victim, (intelligent student in non-science subjects) - Unit on T. V. Production - "I learned that I'm me and the way people see me won't bother me any more"

ANECDOTAL DESCRIPTIONS

Janice Carnahan - Junior physics student

This paper will attempt to evaluate the electronic units of the ICDC program. When I took this unit, I only went through six booklets because I didn't know too much about electricity at the time. When doing a booklet, I would do all the projects it said to do, then take the final test. By doing it this way, I learned at my own speed. I feel now, since I have taken this unit, I know more about the electronics field.

SUGGESTED IMPROVEMENTS:

a. Make the book more interesting
   1. Cartoon quips
   2. Coloration

b. Flash cards
   1. We made some flash cards and they helped us learn a lot faster

c. Better description on illustrations

d. Don't make the post and pre-test the same or almost alike. Put different questions on both.

e. Put the answers on the tests in a different book.

GOOD POINTS:

a. Easy to understand - very good wording

b. Give a lot of information on each topic.

David King - Junior physics student

Area - Electronics - 13 booklets

Background - No previous electronic knowledge

I completed these electronic booklets over a 3 week period, allowing myself an average of one class (40 minutes) for one individual booklet.

I never read the table of contents, but turned directly to the pre-test. I skimmed over the pre-test. I noticed that in all except one booklet I knew none of the answers. I was enthused about the booklets I did because of the short tests.

I quickly spotted what I needed to learn and set myself to doing so by reading the booklet. I examined the drawings closely and set up the projects required.

Then I began the final test. Because they were short I was able to learn them all very well.

I am writing this report 2 1/2 months after completing the booklets. I have just gone through two of them. I remember all the answers. All these booklets were done in my physics class.

LIKED - 1. Short tests - easy for long and quick learning.
a. Keeps you enthused
2. Answers readily available
3. Needed no aid in understanding how to use them.
4. Learned some needed simple facts in electronics - Example - While working at the baseball field I was asked to turn off a certain area of the circuit panel. I did. It was something I had not known before.
5. We completed so many for a grade-this gave me encouragement.

DISLIKED -
1. Diagrams without depth
a. Lack of colored pictures
2. Needed kits for added knowledte and realization.

I learned very much about basic electronics and I believe I haven't lost it yet. We did take a final test in class and I seemed to remember everything without studying. The one idea that may carry these projects very far may be the development of kits with all items talked about in them. We did make flash cards for definitions, symbols, and colors. They were good. I think the biggest credit of the booklets was they kept me interested.

TEACHER SUCCESSES

Many teachers are hesitant and slow in trying new ideas and approaches that are not closely related to their own currently used methods. The success rate of selling the teachers on utilizing this type of curriculum was very good because of the college credit course that was offered to the faculty. The majority of the faculty participated, became involved, and were happy with the changes and student outcomes resulting from use of the ICDC materials. The general consensus was that most units were usable, others needed some modifications, but the important thing is that very few units were not applicable at all.

The following comments are a few pulled from the college credit evaluation forms.

E. Starbuck - Commercial teacher - "This course was additionally valuable in the opportunity it gave me to learn more about some of our Meeker students." "The convenience of being able to prepare the ICDC Dictation Tapes for both individual and class use on and for the equipment on which it will be used was efficient educationally and economically. The shorthand students are already making use of these supplementary dictation materials."

I. Shults - Math teacher - "Overall these units were very effective for the uses I made of them."

L. Irwin - Art teacher - "I related career development in my classroom, spent a lot of time on individual needs and assignments and had a very successful relationship with my students."

J. Irwin - English teacher - "We will continue to work on the incorporation of ICDC units into the English curriculum and we will continue to use the LIM as a learning model."

IV. RECOMMENDATIONS FOR IMPROVED IMPLEMENTATION

1. A total curriculum covering all the areas should be developed.

Needed units or carrier projects should be developed for the behavioral objectives covering critical concepts in the areas of the ICDC for which these were not done because of the lack of funds in the original project and the need to give priority to those areas that the school surveys revealed were receiving the least attention at present.

2. The quality of units should be improved.

Many aspects of the materials are well done but there are some suggestions made by students, teachers and administrators which would improve the quality. These are:

a. The units need to be made more attractive by adding color and graphic descriptions.
b. The units need to be developed in simpler terminology with humor (such as comic illustrations), and a more humanizing approach.
c. The activities in the units need to be more varied, imaginative, and with directions to see or use real objects.

3. A filing system or systems for the materials should be developed. (This would make a great Carrier Project.)

a. Color code each category, i.e., making the 1100's blue, 1200's red and the 1300's white.
b. Cross code the unit numbers on each unit that can be used more than once. In other words both numbers should appear on each unit.
c. In the 1100 series each unit should be color coded and number coded.
d. At least 10 copies of each unit should be distributed to the different schools at the same time so that the filer can go through the materials and set up a filing system from the start of the program and not have to continually go back and insert units. Any units that would follow up after the initial system was set up should fit the numbering system.
e. In the essence of time and for teachers who are not completely sold on this, a list of the different units in terms of subject matter would be helpful and should be developed.
f. Use a filing cabinet system instead of a vertical file, thus making looking for units much easier.
g. Make sure that the codes on the units are correct before they are sent out to the individual schools.
h. Use a pair of gloves in the filing of these units. (Many nails and cuticles have been ruined here.)

4. A student record keeping device should be developed, tried out, and disseminated.

This could possibly be in the form of an 8 1/2" x 11" card containing the following:

Student name
Class
Sex (optional)
Complete list of ICDC index numbers for each unit (about 200 at present) with extra spaces provided for carrier project numbers.
Date space after each ICDC index number to be used as a check-off when unit is completed by student.

This above card could be kept in a central office in the school in alphabetical files per class.

The teacher would make new additions to this card as the student finishes each unit by either passing a slip to the office personnel which would contain the student's name, date, and the number of the unit completed, or the teacher could have a photostatic copy of the entire card for each student and make the appropriate notations and then turn in the entire photostatic copy to the office for transfer to the permanent card at the culmination of the class.

As a quick student reference of the units to do and the ones completed the teacher can make a grid of student names down one side of a card and unit numbers across the adjacent side. This can be exposed to the class, since no grades need show on this card (just units completed). (See Attachment G for a sample of such a reference sheet used by a Meeker teacher this past year.)

5. Better inservice programs should be provided.

Some ideas for providing better inservice are: (1), organize college credit classes which encourage teachers to develop or use ICDC materials. (2), to free teachers from their classes by hiring substitutes so the teachers will have time. (3), provide moral and financial support to teachers who utilize the materials. (4), provide several minimum days during each year for inservice sessions. (5), provide preschool workshops on the ICDC materials and their uses.

ATTACHMENT A

REPORT ON PROMISING CAREER EDUCATION PRACTICE
IN SMALL SCHOOLS

TITLE: VOCATIONAL EXPLORATION

SCHOOL: MEEKER HIGH SCHOOL
ADDRESS: BOX 159
MEEKER COLORADO 81641

CONTACT PERSON: Robert King, Superintendent of Schools

SUMMARY: Vocational Exploration is a program through which high school students receive on-the-job experiences and training for regular high school credit, but not for pay. Students are placed in local businesses and agencies approximately five hours per week, usually for an entire school year. They are supervised by the employer who is urged to expose the students to all aspects, both good and bad, of the business, and to encourage development of such general work qualities as punctuality, honesty, reliability, safety, and good human relationships. Grades are assigned jointly by the employer and a coordinator from the school staff.

TEXT:

A. ANTECEDENTS:

1. Indentification of Needs:

The small rural high school has been limited in the amount and diversity of career education it can offer. Vocational training has involved the dual problems of costly facilities and instructors, and the low enrollment possible. And yet rural youth, who have been preponderantly moving to metropolitan areas upon graduation, have significant need for such education and only half of these were completing a four year program, but our general curriculum was primarily of a college preparatory nature. Our only vocational programs were agriculture, secretarial, and homemaking. The value and importance of work seemed to be down graded as parents encouraged their children to get an education so they "wouldn't have to work for a living". Our cost per student was already very high without adding more instuctors, buildings, and equipment--equipment which might become obsolete very soon.

A graduate opinion survey indicated most of our students were ending up in a job within 5 years after graduation usually wishing they had had better training for such work while in high school, a better notion of what jobs were available, and a better basis for choosing a job or career.

2. History of Development

We were a member of the Western States Small Schools Project, a small school improvement effort. This project had been very active in identifying the short comings as well as the potentials of small rural schools, and in designing efforts to overcome the lacks and capitalize on the potentials of smallness. The whole area of career education was proposed to the Ford Foundation

as a reasonable action research area in the early 1960's. From a local druggist who had been searching for a way to interest local students in pharmacy, and from the County Superintendent of Schools came the suggestion that we utilize local businesses as training stations. The WSSSP staff asked us if we would be willing to run a pilot program in 1965 to ascertain whether local businesses would indeed cooperate with such a program. This was a question which seemed of significant concern to program officers of the Ford Foundation.

We surveyed the town (population 1500) and found there were over 70 businesses, offices, or governmental agencies willing to offer their help. The local agriculture teacher who had a good relationship with local businessmen, having taught here for twenty years, was given the added assignment and a small remuneration for coordinating the program. A half dozen students were recruited and the program was an immediate success growing in a few years to a range of 30 to 40 students each year.

B. DESCRIPTION OF THE PRACTICE

Students enrolling in Vocational Exploration do so when registering in the fall. They are usually juniors or seniors, but we have no rigid rule on this. Occasionally freshmen and sophomores have been enrolled. However, juniors and seniors are usually licensed drivers which simplifies the transportation problem as our high school is at the edge of town and walkers have to hurry as well as face very cold winter weather. Some ride bicycles or motorcycles. Boys and Girls both enroll but usually we have twice as many boys as girls in the program.

Initially our high school principal and school coordinator called a "Career Selection Agent" tried to place the student in the job the student requested. Now we have the student apply directly to the business or agency and then get approval from the principal and career selection agent. The student will usually select a job related to his interests or career plans. Our high school guidance counselor gives General Aptitude Test Batteries for which he has been qualified by the State Employment Service. From these the students have better ideas of their aptitudes.

Students find out the most favorable times for learning at the stations (our local hospital favors mornings) and then jointly with the pincipal work out the schedule. We are now on a modular schedule consisting of 20 minute modules. For 10 semester hours of credit (equivalent to a solid Carnegie Unit) students must spend 14 modules or 280 minutes per week, on the job just as in any other laboratory class. These modules may be put together in whatever combinations work out best for the job experience on one hand and the students schedule on the other. One boy spent only one day a week all day while working with the local office of the United States Forest Service so he could participate in their Friday field trips. Girls at the Hospital often go three days

a week for between one and two hours as laboratory work is performed on alternate days.

While still on traditional schedule our students spent one hour per day (at the same time daily) at their work stations. Modular Schedule gives us more flexibility to work the assignment on the most effective times and also to work in partial assignments (for fewer than 10 semester hours) where this is advisable. Most students spend all year at one work station, although this again is flexible, and individual arrangements are made in the best interest of the student.

Parents must sign an informed consent release slip which indicates they are aware of the nature of freedom the student must have to go to and from the job, without direct supervision from the school.

Students are expected to provide their own transportation--by foot, bicycle, motorcycle or automobile. School accident insurance covers the student while he is on the job but not while driving to or from the job--it does not cover accidents in which the driver is a minor.

Employers are contacted by the career selection agent who encourages them to give the students a broad exposure to the natures of the job or business, its problems and satisfactions. No regular workers are to be replaced by the student but the employers should be expected to get some things done, or done better, that he wouldn't have been able to without the student. By using students our local forest service has been able to complete plant collections, set up filing systems, complete mapping tasks that had been needed for years.

The career selection agent will visit each employer at least once every two weeks to check on students' progress, see if any problems are developing, and confer with the employer on grade addignment. Grades are compatible with our other high school grades, and A-B-C-D-F system. The grades and credits count towards grade averages, and high school graduation the same as any other subject.

C. SPECIFIC CONSIDERATIONS AFFECTING IMPLEMENTATION:

We were not able to free a teacher from regular full time duties to supervise and coordinate the program but had to assign the vocational agriculture teacher who makes visits to local work stations during his planning time. More time would be desirable. We hope to have him 40% to 50% of his time next year since he will retire from his teaching job. With this much time he will be able to visit each student on the job at least

weekly confer weekly with the employers and coordinate the job experience with the student's other studies and teachers.

With a minority of the students we have had trouble with absenteeism. Often the employer has failed to note the absence or has been reluctant to "tell on the student". Closer coordination with the school would help prevent this.

Some employers have occasionally given a student only a limited or boring experience, such as sweeping the garage floor daily. The student is encouraged to report his experiences to the career selection agent so that the problem can be alleiviated by a talk with the employer.

Some students have liked the job so wellthey have forgotten the time and been late getting back to the other classes. Teachers are encouraged to be tough on them for this if it is repeated after a warning.

Occasionally a personality conflict develops between a student and employer. The student must be either encouraged to tought it out (a good learning experience in itself) change the behavior causing or intensifying the conflict, talk to the employer and try to resolve the conflict, or to change work stations. Recently we switched two students to help with two conflict problems.

In implementation we would encourage schools to start with a few students and little promotion and let the program grow naturally. If certain work stations prove unsuitable because of the quality of supervision, the amount of learning provided, or safety practices, they can quietly be removed from consideration. It would be wise to place students initially who have a high probability of doing well. This will start the program with a good reputation. However, we have found that some students, while very poor in the classroom, are excellent on the job.

Next year we are hoping to provide one meeting a week for students to engage in a seminar type experience of sharing experiences and ideas that come out of their jobs. We also want to try to provide time for our counselor to visit the employers and work stations to coordinate his efforts more closely with the students job experiences.

D. VITAL STATISTICS:

One of the nice things about this program is that it uses the resources of the community, both humans and facilities. Therefore the cost is very small. We have paid our career selection agent $600 per year because it was in addition to his full teaching assignment. That has been our only cost. We have used no equipment or materials (other than GATB testing supplies). However, we are considering supplementing the experience with some materials in the future. These will be pre-packaged units or cassette tapes dealing with work habits, skills, expectancies, etc. and will be individually assigned and completed. From comparing the experiences of sister schools working on career development with our experience in the program, we strongly urge beginning schools to not overburden the program with typical classroom practices of reading, writing, and testing. This runs a danger of turning the students "off" before they have the advantage of being "turned on" by the actual job experience.

If supplemental information and training is available, it is our feeling it can best be given concurrently with the job experience.

Having the students work for pay would not be advisable in our community for these reasons:

(1) The job market is such that in the winter we must not displace any adult workers, who are usually also supporting a family.
(2) It would cut dowm tremendously onthe work stations available as many would not be able to add payroll.
(3) Some students would be attracted away from regular classes of value to them just by the small wages they would make.
(4). The emphasis on exploring and learning would take second fiddle to earning money.

E EVALUATION:

From a half dozen students originally enrolled in the program it grew in two years to over 30, and has been maintained at a level of 30 to 40 since, even though no formal annoucements were made, nor was any effort made to steer students into the program.

Almost all of local employers willingly accepted the students and have continued to do so.

A local boy, about to be expelled started vocational exploration at the Ford Garage. Immediately he was hired for after school and Saturday work. His employer gave him an expensive tool set and a steady summer job. Upon graduation he went to work as an automobile parts salesman and now is managing a parts store.

Another boy had quit school for two weeks but continued in his vocational exploration job at a filling station. He subsequently repaired airplane motors in Vietnam.

Another boy was immediately fired by his employer for taking 50¢ from the cash register--an invaluable lesson in the necessity for honesty.

A girl who had planned for years to be a nurse, readily dropped these plans after one year's vocational exploration in the local hospital. Another girl (who had low math scores on her college entrance exams) was only able to get into nurses' training because of the recommendations from the hospital administrator and head nurese which came from her two years of vocational exploration. Another girl is now in a veterinary technician's school. Her interest in, and awareness of this new job opportunity came from working at the local veterinary clinic under the vocational exploration program. Many more such instances could be cited.

Our local school has had a manyfold return from the small investment in both time and money that we have put into this program. We have done no formal evaluation largely because the success of the program has been so self-evident to students, employers, administration and staff, and board of education. By far the majority of the matches of students and jobs have been successful. The relatively few unsuccessful ones have perhaps been valuable experiences also. This has indeed been a "high return" program for us.

ATTACHMENT A

SOURCES OF CONTACT FOR FURTHER INFORMATION:

Sample consent slips, student schedules, student testimonials, etc, are available from Meeker High School. Also a slide series with taped narration is available. A sound movie, on the Meeker Schools which contains a section on the Vocational Exploration program,is available from either Meeker High School or Northwest Regional Educational Laboratory. Amplified phone discussions of the program are available by prior arrangement with Meeker Staff members or students. Visitors are welcomed.

Attachment B

DESCRIPTIVE BROCHURE OF EDUCATION 233

WESTERN STATE COLLEGE,

WESTERN STATES SMALL SCHOOLS PROJECT,

& MEEKER SCHOOLS are pleased to co-sponsor this course.

EDUCATION 233 - WORKSHOP IN EDUCATION - INDIVIDUALIZED INSTRUCTION
utilizing
THE LIFE INVOLVEMENT MODEL

Instructor - Dr. Rodney Anderson

Credit - 3 quarter hours graduate credit

COSTS: Tuition - $45.00 note: for all Meeker Teachers WSSSP will pay at least two-thirds (30.00) of tuition charges through local implementation support for the ICDC curriculum and will provide all course materials necessary.

Class Hours - 30 hours

Sessions - I - At least three large group input sessions for entire class will be scheduled in February, March, April or May, 1973. These sessions (2 hours in length) will be video-taped for viewing by those teachers for whom there is a time conflict. (6-12 hours)

II - At least three medium group sharing sessions will be held at either the building level or subject area level. (3-6 hours)

III - At least three individual or small group conferences will be held either with the course instructor, one of the consultants, or a coordinator. (1-3 hours)

IV - The remaining time will be working independently on projects. (9-20 hours)

GOAL: The goal of this course is to provide several alternatives to individualized learning through the use of ICDC (Integrated Career Development Curriculum) materials, LIM (Life Involvement Model) materials and other activities related to venture and carrier projects similar to creative activities workshop held in the fall 1972. Most of the course will practice what it preaches by consisting of individual projects.

1. Aims and Objectives of Course

   Specifically the course is designed to:

   1. Assist Meeker High School teachers and administrators to organize, select and/or develop, use, evaluate, and modify ICDC materials.

   2. Assist Meeker Elementary School and secondary teachers to organize, select and/or develop, use, evaluate and modify Life Involvement Model materials.

   3. Assist teachers to relate subject matter now teaching to career development and to develop appropriate materials.

   4. Assist teachers to develop activities for classroom use based on 1972 Fall workshop on creative environments.

METHODS & PROCEDURES:

A. Group Sessions

   1. Introduction to ICDC materials-held in September 1972 for secondary teachers (2 hours)

   2. Introduction to SPURS LIM materials-held in August 1972 for Meeker teachers (1-3 hours). Optional presentation by Rod Anderson in February 1973.

   3. Creative Environment workshop-held in October 1972 for elementary and selected other teachers. (6 hours)

   4. Registration and explanation of course-February 1973 (1 hour)

   5. Presentation by Dr. Robert Taylor on "Current Trends in Career Education", Dr. Ed Moe on "Rural Sociology", and Chet Hauskens on "Northwest Regional Lab Efforts in Career Education".

   6. Presentation by Harrell Guard on Implementing Career Education in present classrooms. (2 hours)

   7. Interpretation by Dr. Bob Whittemore of results of ICDC pretests. (2 hours)

B. Sharing Sessions:

   Minimum of 3 one-hour sessions in smaller groups (building level, subject level, or interest level) sharing ideas, problems, and progress in the course are required. Consultants or coordinators will conduct these (3-6 hours)

C. Individual Sessions

Participants will confer monthly with the instructor, and periodically with consultants and coordinators, concerning their individual projects and any other concerns related to the class. Consultant Ted Bettridge will assist individuals or small groups who wish concerning creative environments projects (1-3 hours)

D. Independent Work Sessions (9-20 hours)

1. Time to review, organize, select (or create), evaluate and modify ICDC materials.

2. Time to review, organize, select, (or create), evaluate, and modify other LIM materials (SPURS TYPE).

3. Time to scrounge for and put to use free or inexpensive materials from the community.

4. Time to relate present classroom activities to Career Development.

INSTRUCTION:

1. Dr. Rodeny Anderson will meet the staff once a month to assess progress and critique materials (February 19, March _____, April ____, May ____), and will be responsible for evaluating the class.

2. Consultants will make presentations and hold individual or group conferences as participants desire and time permits.

3. Coordinators (principals and superintendent) will be in charge of daily problems and will conduct sharing sessions.

MATERIALS:

1. Notebook will be provided for each participant.

2. Selected references will be included or given out as course progresses.

3. ICDC materials (units and carrier projects are filed in the middle office of the high school and may be checked out.)

4. SPURS materials are filed at Elementary School, Junior High and Rock School, and may be copied.

5. References for which limited copies are available or for which limited demand is expected are shelved in the Superintendent's office and in the junior high and elementary school offices.

6. Additional materials (paper, etc.) which may be needed will be supplied by Meeker Schools or WSSSP.

Requirements for High School teachers (optional for elementary and junior high)

1. Following the passing out of complete code system sheets for ICDC:

   A. Review at least 10 units in Basic Technology
   B. Review at least 10 units (or carrier projects) in Society and Work.
   C. Review at least 10 units (or carrier projects) in Career Guidance.

   Keep notes from your review as to potential uses, strengths, difficulties, etc. Be prepared to discuss these in sharing sessions and with Dr. Anderson. It is hoped some of these will be used as a basis for your independent work.

2. Either select units or carrier projects that you will use in your classroom, or modify (in written form) and use, or create new units, ventures, or carrier projects (in written form) for such use.

3. Try out the materials selected (or modified or created) in your classroom and report results (negative and/or positive) in writing.

Requirements for elementary teachers (optional for Junior High and High School.)

1. Following the passing out of Lists of SPURS materials:

   A. Review at least 10 units
   B. Review at least 10 ventures
   C. Review at least 10 carrier projects

   Keep notes from your review as to potential uses, strengths, difficulties, etc. Be prepared to discuss these in sharing sessions with Dr. Anderson. It is hoped some of these will be used as basis for your independent work.

2. Either select units, ventures or carrier projects that you will use in your classroom, or modify (in written form) and use, or create new units, ventures, or carrier projects (in written form) for such use.

3. Develop or write up units or activities utilizing scrounge materials from the community.

4. Try out materials selected (or modified or created) in your classroom and report results (negative and/or positive) in writing.

OPTIONAL FOR ALL PARTICIPANTS:

1. Relate the subject you are now teaching to Career Development either by a short written paper (1-3 pages suggested) or by creating LIM type materials for such correlation.

MEASUREMENT FOR GRADE:

A. Complete a minimum of 30 hours of participation. Keep log on attached format.

B. Acceptable quality and quantity determined by individual conferences with Rodney Anderson.

C. Provide no more than one page evaluation of course with a recommended grade earned.

GOOD LUCK:

The guidelines have been developed for guidance only. Consideration will be given to other interests. Let's discuss them on February 19.

COMPLETION DATE IS: May 21, 1973.

Attachment C

EXAMPLE OF TEACHER'S COURSE EVALUATION, TIME LOG, AND MATERIALS REVIEW OF IN-SERVICE CLASS IN ICDC AT MEEKER HIGH SCHOOL

COURSE EVALUATION

Education 233 - Workshop in Education; Individualized instruction
Instructor: Dr. Rodney Anderson
Student: Ethel Starbuck
Credit: 3 quarter hours' credit (graduate)

The input sessions were exceptionally interesting and informative. The personnel represented a wide variety of areas and background.

The course materials and projects absorbed a great many hours of time, but it was time well spent. These materials and tapes will be available for school use for the next several years.

As for the use of these materials, it is my belief that it will be the rare student who will seek these out in the principal's office on his own initiative. My students were cooperative; and from their evaluative comments, I would assume that they enjoyed some of the units; but I brought the business-related units to the classroom and mentioned their availability and value. Also, they were allowed to work on the units in pairs. Our students appear to be gregarious and enjoy things they do together for a longer period of time than an individual study.

This course was additionally valuable in the opportunity it gave me to learn more about some of our Meeker students.

The convenience of being able to prepare the ICDC Dictations Tapes for both individual and class use on and for the equipment on which it will be used was efficient educationally and economically. The Shorthand students are already making use of these supplementary dictation materials.

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
8-72	Input	Introduction to SPURS LIM materials	3 hours
9-72	Input	Introduction to ICDC materials - for secondary teachers	2 hours
2-73	Input	Registration and explanation	1 hour
2-20-73	Input	Dr. Robert Whittemore, Dean Extension University of Nevada	2 hours
		Transcription review of input notes	30 minutes
3-26-73	Input and sharing	Dr. Rodney Anderson	15 minutes
3-27-73	Sharing and input	Dr. Rodney Anderson	15 minutes
	Sharing and input	Panel project discussion: Project I Dr. Rodney Anderson Dr. Robert Taylor, Director, National Center for Voc-Technical Education, Ohio State University Dr. Ed Moe, Professor of Sociology, University of Utah Dr. Chester Hauskens, Northwest Regional Educational Laboratory Merlin Anderson, WSSSP Director, Nevada Herb Steffens, WSSSP Coordinator Dr. Henry Isaacson, Dean of Students, Ricks College, Idaho	30 minutes
3-27-73	Input	Dr. Robert Taylor, Director, National Center for Voc-Technical Education, Ohio State University	1 hour
4-2-73		Transcription review of input notes	30 minutes
4-4-73	Sharing	Mr. Richard Flaherty, Principal	15 minutes
4-10-73	Input	Harrell Guard, Northern Colorado BOCES	1 hour

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
	Input and Sharing	Cedar City, Utah, Conference	1½ days
4-15-73	Individual	Study of notebook materials	1½ hours
4-17-73	Individual	Transcription and study of Guard input	1 hour
4-17-73	Individual	Study of notebook materials	45 minutes
4-18-73	Individual	Study of notebook materials	45 minutes
4-19-73	Individual	Study of notebook materials	1 hour
4-22-73	Individual	Study of notebook materials	1 hour
5-4-73	Sharing	Richard Flaherty, Principal	30 minutes
5-(14-17)-73	Individual	Study of the Colorado State Plan for Career Education--Joint Agency Memorandum by Governor John A. Love	4 hours
5-15-73	Individual	Write-up of course evaluation	30 minutes
5-15-73	Sharing	Richard Flaherty, Principal	30 minutes

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
		Review of Units:	
		Basic Technology	
3-26-73	Individual		1 hour
3-28-73	Individual		1 hour
3-29-73	Individual		1 hour
3-30-73	Individual		2 hours
		Society and Work	
3-29-73	Individual		1 hour
3-31-73	Individual		2 hours
4-1-73	Individual		30 minutes
		Career Guidance	
4-2-73	Individual		1 hour
4-3-73	Individual		1 hour
4-4-73	Individual		30 minutes
4-5-73	Individual		1 hour
4-6-73	Individual		30 minutes
		Summary of Units:	
4-14-73	Individual	Transcription	1½ hours

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
		PROJECT I:	
	Students--Teacher	ICDC Study Units, one module (20 min.) per week	17 hours
		Teacher evaluation and summary of student evaluations:	
5-14-73	Individual		2 hours

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
		PROJECT II: Determination of appropriate source materials from ICDC Units for supplementary dictation materials for advanced shorthand recording of these materials on tapes; use of tapes by students.	
4-16-73	Individual		2 hours
4-19-73	Individual		2 hours
4-26-73	Individual		1 ½ hours
5-1-73	Individual		1 hour
5-3-73	Class - Teacher		30 minutes
5-4-73	Individual		1 hour
5-7-73	Individual		1 hour
5-9-73	Individual		2 hours
4 & 5 - 73	Class, Teacher, Students	Newly prepared ICDC dictation tapes used by students individually and in classes	5 hours

Integrated Career Development Input.

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant Ethel Starbuck

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT
4-17-73	Students--Teacher	PROJECT III: Verbatim conference reporting practice for advanced Shorthand students from video-tape of Career Education Input by Dr. Harrell Guard. Excellent practice--real conference-type situation with difficulty in hearing some questions and identifying speakers during question and answer periods.	1 hour
4-17-73	Students--Teacher	Note-taking practice for second semester Shorthand students of selected portions of Career Education Input by Guard, from Video-tape. Both groups expressed interest in the content.	45 minutes

REVIEW OF ICDC OR SPURS LIM MATERIALS

SUMMARY OF STUDENT COMMENTS ABOUT UNITS (See ICDC LEARNING UNIT EVALUATIVE SHEETS.)

Name and/or Number of Unit, Venture, Carrier Project	Notes on uses, problems, potentials, modifications, etc.
Computer Applications, 1152.3	"Good for general knowledge; easy to understand; pictures could be more clearly reproduced; explained everything in a proper manner; should have more information about the check amount, customer account, etc.; illustrations fuzzy so they were hard to understand; they should include more information about the general make-up of a computer; need to clarify the information."
Types of Computers, 1152.1	"It was a good idea, but I failed to really grasp any solid information concerning the machine's function and what it really looked like; didn't explain very well; wording in places hard to understand and hard to see the pictures provided in the unit; should have the actual machines to work with somewhere; the unit was very thorough and quite easy to understand; a very good unit except for the pictures."
Computer Functions, 1152.2	"The pictures were hard to see; the unit really helped me know a little more about computer functions; could be improved by putting more information into better logical form; the pictures were unrealistic to me; the questions were put so that you were unsure of the answer; did not spend enough time on each machine."
Using the Telephone, 1162.7	"I really enjoyed the unit; it was very comprehensive and easy to understand; this unit was enjoyable and fun; I could tell by the way people answer that this is a small town; very interesting booklet; told all of the proper manners and gave a chance to practice; the book was informative but in large cities it might be dangerous to give your name."
Application Blank	"This would really help a person who was to apply for a job; important thing to know how to do; simple to understand and could be applied to any job application; important and helpful for further education on filling the forms; has a lot of good illustrations."

REVIEW OF ICDC OR SPURS LIM MATERIALS

SUMMARY OF STUDENT COMMENTS (Continued)

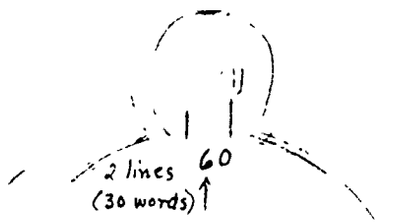
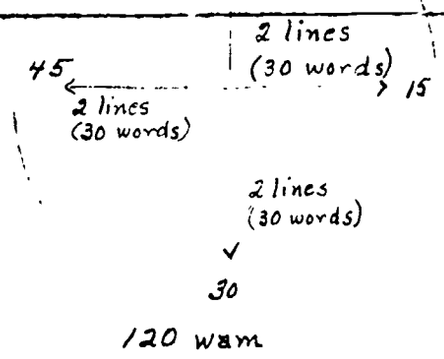
Name and/or Number of Unit, Venture, Carrier Project	Notes on uses, problems, potentials, modifications, etc.
Ditto Master	"The unit was easy to understand; good review; good, precise, clear directions; I like this unit; very interesting; a very worthwhile unit."
Job Interview, 1161.6	"The material was difficult to read (reproduction); helped me learn the correct way to get a job; I enjoyed this unit and feel that it prepared me for future job applications; good show of different applications, but some were poorly reproduced; very thorough; could help anyone with an interview; easy to understand."
Filing	"Printing was clear, good general review; learned a lot that I didn't know; I like this unit done by the Colorado Business Education Association better for you can understand the material easier; everything is very clear; enjoyed this unit; applied what I learned later in my typing class; informative and well organized."
Business Correspondence	"Good things to know; a very good unit to take; relevant to the classes which I am now taking; the differences of the words could have been clearer; they could explain the reasons for the examples; very interesting booklet; need more performing material; explain in more detailed form; had a lot of information and good ideas."

These appeal to me as a gold mine of suggestions and sources for the use of teachers in planning their course activities. Much advance planning would need to be done to provide the films, literature, and resource people when needed.

REVIEW OF ICDC OR SPURS LIM MATERIALS: SOCIETY AND WORK

Name and/or Number of Unit, Venture, Carrier Project		Notes on uses, problems, potentials, modifications, etc.
Sources of Economic Information	1226.0	--Sources current References only; no content.
Knowledge Explosion	1229.0	Many of these suggestions would need to be conducted on a class rather than an individual basis to be practical in terms of cost and effort.
Standard of Living	1235.0	Here, again, many of these would be class activities. These appeal to me as having more usefulness to a teacher in making her lesson plans than for an individual student to follow.
Community Action	1243.0	This could represent a semester's endeavor and still only scratch the surface. Morris Rosenberg's article on Political Apathy could be used by different students in class for role playing.

REVIEW OF ICDC OR SPURS LIM MATERIALS: SOCIETY AND WORK

Name and/or Number of Unit, Venture, Carrier Project	Notes on uses, problems, potentials, modifications, etc.
Life Styles 1251.0 	Possible use of Essay on Life Styles as supplementary dictation material in Advanced Shorthand practice. Dictation rate can be figured as follows: Average line length: 6 inches Elite type: 12 spaces to the inch Spaces on average line: 72 Five strokes per word: Approximately 15 words per line; Dictate 2 lines every 15 seconds for 120 wam.
	Transcription could be varied in the following ways: 1. verbatim; 2. summary; 3. type answers to questions; 4. oral read back; 5. oral restatement in students' own words of meaning conveyed.
How Jobs Affect Life-Style 1252.0	An excellent unit for self-introspection; could be suggested to students as a follow-up of Unit 1251.
Consumption 1253.0	Practical unit for individual use. Materials and sources all available locally.

REVIEW OF ICDC OR SPURS LIM MATERIALS : SOCIETY AND WORK

Name and/or Number of Unit, Venture, Carrier Project		Notes on uses, problems, potentials, modifications, etc.
A Unit on Use of Leisure Time	1254.0 A 30	Clever cartoon illustrations; good for self-evaluation and guidance; contains thought-provoking moral overtones.
Leisure Time	1254.0	Interesting project; avoids confrontation with moral decisions of previous unit; might be "safer"; but of less value.
A Unit on Financing Business Enterprises	1255.0 A 18	Unit lends itself to class activity. I plan to use "I Remember the Thirties," by John Steinbeck as supplementary dictation material for advanced shorthand practice.
Financing Business Enterprises	1255.0	Similar to above unit; but omits John Steinbeck's article, "I Remember the Thirties."
Production	1256.0	Refers to seven different films; more practical for a class than individual activity. Film dates' span: 1949-1968. Follow-up could be individual.
Credit	1257.0	Could be used here on an individual basis; except for the films, most of the sources are available in Room 112.

REVIEW OF ICDC OR SPURS LIM MATERIALS: CAREER GUIDANCE

Name and/or Number of Unit, Venture, Carrier Project		Notes on uses, problems, potentials, modifications, etc.
Interviewing	1 2'.(	hi' unit usable as an individual project, e'pecially if the student has access to V, tape recorder, video-tape, newspapers, and magazines.
Matching personal values and abilities with occupational choices.	1?·1.0	Excellent job evaluation form; could be used either as an individual project or class activity.
Weighing Factors	1·?2.0	(One-page unit.) Individual method of making decisions.
A unit on matching personal characteristics with career opportunities to enhance job satisfaction	1·?3.0	Refers student to "Attached OCCUPATIONAL ANALYSIS FORM" which is NOT attached.
Feelings of self-career decision making	1?41.0	Good individual exercise.

REVIEW OF ICDC OR SPURS LIM MATERIALS : CAREER GUIDANCE

Name and/or Number of Unit, Venture, Carrier Project		Notes on uses, problems, potentials, modifications, etc.
Self-Image	1341.1	Individual self-evaluation: must check validity of self-image with others.
Integrating Knowledge About Self	1341.2	Instructions for summary project covering previous units.
Self-Assessment	1341.3	Group and individual projects; more helpful detail than in previous similar units.
Personality	1341.4	Individual small group and class activity.
Determining Abilities	1342.3	Short individual unit.

REVIEW OF ICDC OR SPUFS LIM MATERIALS: CAREER GUIDANCE

Name and/or Number of Unit, Venture. Carrier Project		Notes on uses, problems, potentials, modifications, etc.
Discovering Interests	1[illegible].6	Includes self-picture check lists and extensive job classification chart. Part of unit dependent upon KUDER PREFERENCE RECORD test.
The Use of Leisure Time	1[illegible]4.0	Individual project and adult interviews.
Developing a Report on the Community I Live In	1371.0	Steps to follow in a study of and report on the community.

Attachment D

REVIEW OF LIFE INVOLVEMENT MODEL CLASS, EDUCATION 233, BY AN ADMINISTRATOR-TEACHER

Robert King Meeker High School

I participated in this class from two aspects: First, as Superintendent and Curriculum Director of Meeker Schools I helped in planning, organizing, and coordinating the class as part of my function in encouraging, arranging, and supporting what I conceived to be a valuable in-service program for our teachers and administrators in up-grading our instructional program. I had the further responsibility of seeing that we got some implementation of the ICDC into our high school since I had been instrumental in committing our school to be a demonstration. I further wished the implementation of SPURS materials in our schools (primarily, but not exclusively, in the elementary) since I had been closely associated with the SPURS project as both a trainer of personnel and a member of the Quality Assurance Panel and had witnessed first-hand some of the dramatic changes and improvements brought about in SPURS schools. Both of these projects are approaches to instrument and implement the Life Involvement Model ideas as formulated by Dr. Asahel Woodruff. The concept of career education and Dr. Rod Anderson's "creative environments" approach are both closely related and supportive of the LIM Model also. Several years of association with Dr. Woodruff has convinced me that the LIM Model is the most comprehensive and promising approach to effective education if the engineering job of inventing, adapting, and working out the practical parts can be accomplished. I perceived this class to be one of the components of this job.

Although we were unable to carry on all the activities as planned, I think that from the above standpoint the objectives were accomplished to a significant degree, and the feedback from individual teachers convinces me that in some instances it was to a remarkable degree. The obstacles of trying to inject something new and different into a busy school and staff, "saturated" already with activities, materials, obligations, and expectancies (both internal and external) prevented the early review, selection, and tryout of materials in all cases. Perhaps beginning a course like this at the start of school in the fall (or earlier) would be preferable. The further logistics of obtaining, organizing, shelving, and making available of the huge numbers of individual material components was another roadblock which prevented full accomplishment of objectives. The added problem existed in conducting a college credit class in a non-typical manner which put the burden on class members to be active participants rather than passive receptors. And lastly, quite a few of the participants enrolled (somewhat reluctantly) because of strong persuasion by myself and/or the principal. Because of this they approached the task with a negative mind set which served to inhibit their discovery of the values involved.

Some of the activities planned were either not carried out or only irregularly, such as the sharing sessions and individual conferences. This was due to time pressures on the administrator-coordinators and instructor.

In spite of the above problems, many teachers received a first-hand introduction to the LIM Model, the ICDC, and the SPURS materials and are planning on using, adapting, or creating such materials for their classes next year. A few have already done so and have been generally impressed with the results. This in itself justifies the class and with the right kind of followup and support next year there will be further payoff.

The imput sessions were of a high quality and assisted much in putting the "career education" concept in what I consider its proper context, that is as just "good education" concerned with all life (not just with a job), and as infusing the whole curriculum K-12, not replacing but invigorating regular subjects and topics. Several teachers wished we could have given the presenters more time for their presentations.

The backup materials were not widely used and this was largely because of my failure to organize them and make them more easily available. On the other hand, if I had, it would have added to the time pressures felt by many and I am not sure how many would have profited much from them. Just having them did lend an air of legitimacy to the course, I feel.

The second aspect of my participation in this class was as an English teacher participant. From this standpoint, I would rate the course very valuable to me in relating career education to my part of the curriculum and in making me aware of materials and techniques to improve my classroom. I would not rate my own participation so highly in that I didn't review the 30 units until school was out, therefore I didn't choose or adapt or create any LIM type materials and actually try them out on the class. I will be able to do this next year, and given time I intend to organize many of the learning activities I have developed over the years (several of which are very similar to the LIM Model) into LIM type curriculum components and make them available to students in individual "Box Labs".

Since my performance especially as a participant, but also as a coordinator, did not match my intentions, even though I put lots of time into the class and derived many benefits, I would be satisfied with a grade of B.

TIME LOG FOR LIFE INVOLVEMENT MODEL CLASS-EDUCATION 233

Participant_____

Note: Each participant will keep this log of time spent on the class available for the instructor's review and will turn it in at the end of the class before final evaluation. At least 3 input sessions, 3 sharing sessions, and 3 individual (or small group) conferences are required. A total of 30 hours is also required.

DATE	TYPE OF SESSION (Input, sharing, individual or independent work	NAME OR DESCRIPTION OF SESSION	TIME SPENT

REVIEW OF ICDC OR SPURS LIM MATERIALS

Name and/or Number of Unit, Venture, Carrier Project	Notes on uses, problems, potentials, modifications, etc.

Attachment E

A PRINCIPAL'S EVALUATION OF ED 233

Richard Flaherty Meeker High School

The course had three main objectives:

1. Assist Meeker High School teachers and administrators in organizing, selecting and evaluating the ICDC materials.

   I feel that this objective was met by getting all materials in one central location, clearly marked and indexed so that all contents could be available to the teacher in an organized system. The teachers involved in the classes selected materials from all three areas of the ICDC Curriculum and became familiar with the coding system and the different materials available for individual and group projects. Because the materials were available, some teachers had tried to use them for individual projects without taking the time to review the units themselves. By having the teachers review the units they now realize the units are not self directing and require a good deal of teacher time and planning if they are to be used.

2. Assist the teachers in getting a better understanding of the Life Involvement Model.

   This goal was met by having each teacher go through the prepared carrier projects currently in the ICDC system and then giving them additional opportunity to write their own projects. Most of the teachers were familiar with Dr. Woodruff's theory but had not adopted or developed many materials centered around carrier projects. I feel quite confident that more projects will be developed because the teachers now have a better understanding of the nature of these materials and the method of preparing carrier projects.

3. Assist teachers to develop materials related to Carreer Education.

   I feel this objective was met through the informative meetings with Dr. Wittemore and Mr. Guard, and by reviewing the basic technology units.

   Dr. Whittemore presented some very good statistics concerning our school and students. This helped to promote better relations with the teachers and a much better understanding of the total program.

   Mr. Guard definitely pointed out the need for more career education and a need for teachers to become involved in integrating this into their current programs.

   By reviewing the basic technology units several of the teachers found new materials and ideas they could use in their own class. The teachers were not satisfied with the content or organization of some units, but they did gain a good deal of respect for the thought and effort required to produce a unit of this nature.

As far as the material goes, I feel that many of the basic technology materials are lacking in these areas:

1. There are many times when technical vocabulary is used to explain simple ideas and in defining various parts of equipment. If the students understand the terms used in the explanation of the equipment they must already be acquainted with the equipment and parts being defined.

2. Realizing the materials are supplementary in nature I think students should be directed to use maintenance manuals and other sources of information that are lacking in the directions and explanation for using tools and equipment.

3. Some basic technology materials are of little value unless they are used as supplemental or reference materials associated with a carrier project.

Attachment F

ICDC IMPLEMENTATION CASE STUDY OF AN INDIVIDUAL TEACHER

J. Irwin, Meeker High School

I. History

It is difficult to say just when I became involved in the ICDC project. Several years ago, while teaching Home Economics and English 4, I was introduced to Dr. Asahel Woodruff's Life Involvement Model. It fit in so well with the program objectives at that time, that I used it as a pattern to develop both Homemaking and English curriculum. Home Economics was embarking on a wage earning occupational program at the same time, and all Home Economics teachers nationwide were searching for ways to relate general homemaking to careers in home economics related fields. Using the LIM, I wrote several individual units for individual students which were intended as introductions to potential careers.

In 1971-72, my teaching assignment was changed to full time teaching of English. I soon learned, especially with verbally reluctant students, that the world of work made wonderful topics to "English" and communicate about.

Then in the spring of 1972, Don Blanke, guidance counselor, and Robert King, superintendent, verbally requested that I consider incorporating the Integrated Career Development Curriculum into all English 1 and 2 classes and use it, where applicable, in English 4 and Speech. After some consideration, I told them the idea made beautiful sense to me since the ICDC units required major use of language and communication skills.

In the meantime, the District Re-1 Accountability Survey was indicating major community concern with career education opportunities in the local school. It appeared that career education would become a major district goal when the survey results were fully tabulated. (Superintendent's note: This has happened)

The ICDC materials available were ordered, shipped, unpacked, and pre-coded by the three of us in the spring of 1972. I took samples of as many different materials and formats to study and incorporate into English 1 and 2 as I possibly could. I soon learned that no major change in program objectives was needed.[1] I merely needed to add an ICDC introductory unit for fall quarter to the master lesson plans and to add the ICDC to the student's suggested activity lists, under the most appropriate skills columns.

During the opening weeks of school in the fall, Mr. Blanke and I ran all freshman and sophomore English students through the General Aptitude Test Battery; a series of Attitude and Interest Tests presented by Dr. Robert Whittemore, University of Nevada at Reno, to be used in the ICDC evaluation procedure; and the Meeker Title I Attitudinal Survey.

[1] See attached Project Objective

As soon as the GATB results were computed, Mr. Blanke interviewed each student to inform him of the indications of the tests as they applied to career education. Students then were assigned two in-depth occupational surveys and reports on occupations in the Meeker area which they felt they were suited for and would truly like to do.

Students visited local businesses and workers, conducted interviews, and watched work day routines. One occupation was reported on orally in class, the other was presented in a written paper.

Upon completion of tests and reports, students were encouraged to select at random, and based on their interests, units and projects from the ICDC materials. The materials were used only on an individual basis and not in groups. Most were done as homework or directed study activities, and were drawn as requested from the files in the office.

Grades were issued based on a scale of 6 points for each class period equivalency of work done on the unit or project. All 93 students were required to complete a minimum of one ICDC unit or project to meet course objectives. Many students did several units of special interest to them. These were posted by title and time on a permanent student record sheet. Students also had to prepare a written evaluation of the material before a grade was given.

During spring semester, students were divided into seminar groups to study poetry, drama, and television. Occupations in these areas were also discussed, reviewed, and individually studied in depth.

The cost of the implementation of the ICDC materials in the English program was minimal and would be hard to separate from other English class expenses. The speech class took one day more than necessary to visit a motion picture studio in Denver where they talked with directors, technicians, and stage crew people about their jobs and the types of training needed for job entry. Expenses for this trip were no more than budgeted costs for the State Speech Festival, which we attended the same weekend. The studio visited was CVD, makers of the movie "Brothers O'Toole."

After a full year's implementation of the ICDC in an English class, I am pleased to report the project was a success. Student motivation and interest was extremely high. End of the year evaluation tools in English indicate the students have obtained a good command of their language, and communication skills have improved. This year, for the first time ever, I received four volunteered evaluations of the English program. Not one mentioned the need for traditional grammar study, yet all report they feel more self-confident in all language skills including grammar and spelling. During the year, students showed more volunteer creativity than the previous year, and most was initially generated by work in the career education area. Relaxed conversation outside of class about summer jobs and problems related to the world of work also increased. In short, it proved to open some exciting new doors to kids. We shall continue career education and the use of the LIM and ICDC materials next year.

ICDC PROJECT OBJECTIVE

PROJECT OBJECTIVE: The teacher shall devise ways to fit career education information, the Integrated Career Development Curriculum materials, and the Life Involvement Model into the present structure of the English 1 and 2 curriculum without deviating from or distorting presently established objectives for English 1 and 2.

CONTROLLING CRITERIA:

1. The materials and assignments used must aid the development of language and communications skills.

2. Students are to be involved in the planning of the course as much as possible; they are to be offered alternatives in assignment choices and manner of completion.

3. Students shall be encouraged to use their creative capacities and to seek ways to solve problems.

4. Individual records for each student shall be kept and shall include samples taken periodically from the student's work; they shall contain a continuing record of the ICDC units and projects completed.

THE INTEGRATED CAREER DEVELOPMENT CURRICULUM (FROM STUDENT'S ENGLISH HANDBOOK)

When you leave school, you will be expected to go to work. To be a good employee, you will need training for the job you plan to do. Much of this training assumes you have knowledge about mechanics, electronics, spatial relationships, economics, community, and the world of work itself. Do you have this knowledge? Do you know which individual aptitudes and skills will enable you to get a job and keep it?

If not, find out. The ICDC project will help provide you with knowledge about yourself and the world of work.

Your teacher has the complete catalog of units for study and will arrange for you to take aptitude tests you may need to get started.

GENERAL CONCLUSIONS ABOUT ICDC UNITS

1. ICDC units and carrier projects can be effectively incorporated into the English curriculum because all units and projects require the use of language skills such as reading, writing, thinking, interviews, or the development of graphic materials.

   Daigon's statement, "English is ANYTHING that requires disciplined employment of language", helps to justify these materials in an English class, regardless of the subject with which they directly deal.

2. The Basic Technology Units as a group tend to appeal primarily to boys. Girls are very hard to motivate in these materials, yet they also need the knowledge provided to cope with the modern, changing world. I would suggest that these topics be slanted a little more to the interest of girls.

3. Some units, especially Basic Technology, are not challenging enough for the average high school freshman. They are very effective with reluctant readers or those students who have not previously experienced much success in school. Many of my students scored 100% on the unit pre-tests.

   This is not true of the materials in Society and Work and Career Guidance. In some cases, we found those units much too complex and lengthy to be meaningfully useful in the English classes without abandoning the study of grammar and literature.

4. Units which require large amounts of class discussion do not fit into the English curriculum well unless the entire class does the same unit at the same time. We are not set up with our individualized program to do this, because of the widely varying language skills of our students. Not all units can be used by all students because of the massive range of difficulty between units and the accompanying range of ability between students.

   For this reason, we did re-write some of the more complex units for more advanced students who were interested in them so that they could draw conclusions themselves based on interviews, reading, and research of other types without having to rely on oral class discussion of the issues. This seemed to work well, but may have distorted the intent of the units.

5. Units and carrier projects which require specific films or books were difficult to work with. We found the films suggested to be booked six months to one year ahead. Since we rely on rental films only, this creates a problem. Also, because of the cost of rental films, these materials must again be used with a total class group.

Nor did we feel justified in purchasing a specific book when we found ourselves short of literature texts.

Thus, some of these units were not tried in English class, although several students expressed an interest in them.

PROJECT CONCLUSIONS

Actually, it is not difficult to incorporate occupational information, ICDC units, and the LIM into the present English curriculum. It does take considerable amounts of time to accomplish the task.

I began the task, originally, last summer when we first had ICDC materials. Mr. Blanke and I sorted the few materials we had, coded them, and I took samples of the most promising units to study during the summer.

The English objectives were also carefully revised during the summer of 1972, a task which needed to be done anyway since I had just moved from Home Ec. to the teaching of English 1 and 2.

Mr. Blanke and I arranged to do extensive vocational testing early in the fall because we needed to test approximately 100 students and we knew testing time, score processing, and individual conferences with each student would take the majority of first semester.

The first occupational assignments given the English classes were written to include communication skills and were designed so that the amount of classtime used could be controlled. Also, we found ourselves writing assignments which the later shipment of ICDC units included. However, in studying the new ICDC materials, especially those in Society and Work, we discovered that many of them were too long to incorporate into the English classes without excluding time for literature and grammar study. The Basic Technology Units do not have this difficulty. Many of the units were chosen by students for independent study in addition to their usual English class work.

We will continue to work on the incorporation of ICDC units into the English curriculum and we will continue to use the LIM as a learning model.

Attachment G

ICDC IMPLEMENTATION CASE STUDY OF AN INDIVIDUAL TEACHER

Ethel Starbuck - Meeker High School

I. Historical Description of the Implementation

The business-related ICDC materials were used as supplementary material for the Office Practice Aides. The participation was voluntary, and no grades were given on the students' mastery of the units. Used as dictation material in shorthand.

II. Description of Obstacles

The students had little time to devote to these units, as most of them carry a full schedule. The student reaction varied from the extremes of "This unit is fun", to "I hate these things."

III. Anecdoted Descriptions of Success with Students

The units used and the student evaluations were as follows:

Computer Applications, 1152.3 "Good for general knowledge; easy to understand; pictures could be more clearly reproduced; explained everything in a proper manner; should have more information about the check amount, customer account, etc.; illustrations fuzzy so they were hard to understand; they should include more information about the general make-up of a computer; need to clarify the information."

Types of Computers, 1152.1 "It was a good idea, but I failed to really grasp any solid information concerning the machine's function and what it really looked like; didn't explain very well; wording in places hard to understand and hard to see the pictures provided in the unit; should have the actual machines to work with somewhere; the unit was very thorough and quite easy to understand; a very good unit except for the pictures."

Computer Functions, 1152.2 "The pictures were hard to see; the unit really helped me know a little more about computer functions; could be improved by putting more information into better logical form; the pictures were unrealistic to me; the questions were put so that you were unsure of the answer; did not spend enough time on each machine."

Using the Telephone, 1162.7 "I really enjoyed the unit; it was very comprehensive and easy to understand; this unit was enjoyable and fun; I could tell by the way people answer that this is a small town; very interesting booklet; told all of the proper manners and gave a chance to practice; the book was informative but in large cities it might be dangerous to give your name, as recommended in the unit."

Application Blank, ls & iwp 12-71 WSSSP/SPURS "This would really help a person who was to apply for a job; important thing to know how to do; simple to understand and could be applied to any job application; important and helpful for further education on filling the forms; has a lot of good illustrations."

Ditto Master, ls 12-71 WSSSP/SPURS "The unit was easy to understand; good review; good, precise, clear directions; I like this unit; very interesting; a very worthwhile unit."

Job Interview, 1161.6 "The material was difficult to read (reproduction); helped me learn the correct way to get a job; I enjoyed this unit and feel that it prepared me for future job applications; good show of different applications, but some were poorly reproduced; very thorough; could help anyone with an interview; easy to understand."

Filing, Colorado Business Education Association Learning Packet, Contributed by Madelyn Bruning, Area Vocational Center, Southern Colorado State College, Pueblo "Printing was clear, good general review; learned a lot that I didn't know; I like this unit done by the Colorado Business Education Association better for you can understand the material easier; everything is very clear; enjoyed this unit; applied what I learned later in my typing class; informative and well organized."

Business Correspondence, Colorado Business Education Association Learning Packet, Contributed by Connie Wallace, Area Vocational Center, Southern Colorado State College, Pueblo "Good things to know; a very good unit to take; relevant to the classes which I am now taking; the differences of the words could have been clearer; they could explain the reasons for the examples; very interesting booklet; need more performing material; explain in more detailed form; had a lot of information and good ideas."

The tapes which were recorded and used for dictation and transcription practices in the Shorthand classes were:

ICDC 1255.0 A-18, I Remember the Thirties by John Steinbeck
ICDC 1251.0, Reel 1, Life Styles
ICDC 1251.0, Reel 2, Life Styles
ICDC 1229.1, Transportation
ICDC 1229.2, Population Trends

IV. Recommendation for Improved Implementations

As for the use of these materials, it is my belief that it will be the rare student who will seek these out in the principal's office on his own initiative. My students were cooperative; and from their evaluative comments, I would assume that they enjoyed some of the units; but I brought the business-related units to the classroom and mentioned their availability and value. Also, they were allowed to work on the units in pairs. Our students appear to be gregarious and enjoy things they do together for a longer period of time than an individual study.

RECORD OF CAREER EDUCATION UNITS COMPLETED
OFFICE PRACTICE AIDES, 1972-73, MEEKER HIGH SCHOOL

Name	Computer Appli.	F-19 Types of Computers	F-17 Computer Functions	F-4 Using Tele.	Appli. Blank	Ditto Master	F-3 Job Inter.	Filing	Buss. Corres.
Debbi Adams	X	X	X	X	X	X	X	X	X
Vicky Caldwell	X	X	X	X	X	X	X	X	X
Janice Carnahan	X	X	X	X	X	X	X	X	X
Mardy Cook		X							
Rhonda Douglass	X	X	X	X	X	X	X		
Vicki Hallmark	X	X	X	X	X	X	X	X	X
Christie Payton	X	X	X	X	X	X	X		
Janet Prockup	X	X	X	X	X	X	X	X	X
Gala Vanderpool		X							
Kathy Warren	X	X	X	X	X	X	X	X	X

Attachment H

SAMPLE TEACHER DEVISED UNITS STIMULATED AS A RESULT OF ICDC

Ben Martinez-Driver Ed. Teacher Meeker High School

BUYING AND INSURING CARS AND MOTORCYCLES

I. On 6th Ed., Sportsmanlike Driving:
Read Chap. 17: "Buying and Insuring a Car"
Chap. 20: "Action: the two wheeled vehicle"
Take pretests and posttests

II. Read "Used Car Dealers - how they operate"
Sept. 1972, Kiplinger Magazine, pp. 7-10
(Available in my room from me.)

III. Review the following ICDC Units:
#1153.1 Interest Rates
#1153.2 Mortgages
#1162.1 Sales Approach
#1162.2 Sales Demonstration
#1162.4 Selling Objectives

IV. Talk to car and motorcycle dealers.

V. Talk to bankers and loan companies as financers.

VI. Talk to people that you know and have bought cars by financing.

VII. Talk to mechanics as to how to check out used cars to see if they (the cars or motorcycles) are good.

VIII. Ask previous owners about the vehicle you are about to buy.

IX. A. Write an extensive report on your findings.
B. Give an oral report to the class on your findings.
C. Choose some other way to show what you have learned or accomplished.

ALCOHOL AND DRUGS "VENTURE"

I. Read Chapter IV, "Alcohol, Drugs, and Your Life" and "Drugs and Driving", pp. 56-80, 6th Ed., Sportsmanlike Driving.

II. Read related literature on the effects of these.
   A. Pamphlets in Sheriff's office
   B. Pamphlets in my room (108)
   C. Pamphlets in Doctor's offices.

III. Talk to Doctors and Nurses about the effects of alcohol and drugs.

IV. Talk to police, sheriffs, and patrol about accidents caused as a result of alcohol and drugs. Talk to lawyers.
   A. legal aspects
   B. penalties
   C. how detected (tests)

V. Read pp. 23-27, Colorado Fact Book.
   A. Drinking and driving
   B. Implied consent law
   C. Ways of checking alcohol content in blood

VI. Talk to counselors and Mr. Cooley (Examiner).

VII. What can we, the citizens, do to help eliminate these problems.

VIII. A. Write an extensive report on your findings.
   B. Give an oral report to the class on your information.
   C. Choose some other way to show what you have learned or accomplished.

CAR INSURANCE "VENTURE"

I. Read and study Chapter 17, pp. 292-231, in 6th Ed. Sportsmanlike Driving.

II. Talk to insurance agents (Hughes, Riegel)
- A. Collision
- B. Comprehensive
- C. Liability
- D. Property Damage
- E. Bodily Injury
- F. Death
- G. Suit

III. Talk to bankers about Insurance coverage when you buy a car and they finance.

IV. Talk to car dealers as to what insurance to acquire when buying a car (disability, collision, liability, etc.)

V. Talk to Drivers Ed. Teachers

VI. Talk to police, patrol and wrecker service men about moving injured people, moving cars before investigation, charge for towing (when you hit a deer or another car).

VII. What is the National Driver Register Service. pp. 129-130 Sportsmanlike Driving.

VIII.
- A. Write an extensive report on your findings.
- B. Give an oral report to the class on your information.
- C. Choose some other way to show what you have learned or accomplished.

SPOT MAPS AND COLLISION DIAGRAMS "CARRIER PROJECT"

I. Read pp. 238-242, 6th Ed., Sportsmanlike Driving.

II. Acquire a map of the town and use it to plot information and suggest changes.

III. Talk to the police (all of them) about frequent accident spots.
- A. How many accidents there?
- B. Where?
- C. Why?
  - Speed?
  - Carelessness?
  - Blind (poor visibility)?
  - Drinking?
  - Drugs?
- D. Time (noon, after school)?
- E. Seriousness of accident?

(DO NOT ASK FOR NAMES)

IV. Mark map as to number and cause of accidents at each spot per year. Color code it.

V. Make a personal study of the town streets. Tell what streets, intersections, etc. are dangerous and why. How can they be made safer and improved? (Stop signs, clear brush and trees, remove parked cars, make signs visible, etc.) Tell City Council and police.

VI.
- A. Write an extensive report on your findings.
- B. Give an oral report to the class on your findings.
- C. Choose some other way to show what you have learned or accomplished.

Attachment I

Attachment I

Don Blanke

UNIT: COMMUNITY LEADERSHIP

This unit will help you understand the apparent and hidden leaders in the community.

A community cannot survive without leadership. Leadership controls, dictates, and adjusts the populations needs, wants and desires. Without this leadership people could not live in a controlled and cooperative environment.

Critical Properties	Identification, Involvement, and Association of this property
L. Political Controls of elected officials	1. Survey the local community (town, city, etc.) offices for elected job descriptions and ask for sample ballot if available. -Same for County- Identify and discuss people that occupy these positions. Discuss - Are these positions necessary? Why?
2. Non-elected Influential citizens	2. Discuss (Do not mention individuals names.) Occupations of influential people. Income Living Conditions Social Status
3. Qualities and Similarities of Community Leadership	3. Discuss: Whats required to be a leader in your community.
4. Self aspirations	4. Discuss: (In small groups) Will your personal qualities help you to be a community leader? Will your occupation hinder your leadership? Will your social status affect your leadership? Will your income? Will your living conditions?

Attachment J

INTEGRATION OF CAREER EDUCATION IN HIGH SCHOOL ART CLASS

The following short discussions show how this art teacher integrated ICDC material into her class structure.

Lora Irwin - Art Instructor "Choosing a Career in Art"

Advanced art students have had the chance to learn and practice the basic skills. Now they are ready to take on a hypothetical or "real" situation in which their finished product reaps them rewards. This project gave them a short-range goal, and interested some in a future long-range goal.

Students were given "at least" three choices of career projects. EXAMPLE: Gerald Morris, proprietor of the Trash Haul Service in Meeker, has hired you to paint two panels for each side of his truck. The panels are red. The lettering information is as such.....you are, to the best of your ability, to design these panels, use origionality and be neat.

The student needed to use many elements of art. The end result was good and everytime he sees Mr. Morris's truck he is rewarded.

Similar assignments were given to approximately 35 students. Many asked to do another out of their three choices once they had finished their first choice. It was relevant and fun for them.

"Individualized Instruction-A Step Towards Thinking About Careers in Art"

Students who have completed a year of basic skills in art need to explore possibilities of long-range goals toward career opportunities - directly or indirectly.

In class, I created at least three very different career choices for each advanced student. These ranged from directly being involved with an assignment such as painting advertisement signs for a member of the community, to taking on hypothetical tasks such as being involved in creating original fashion designs for a well-known department store.

The students chose their assignment and then signed a contract with me. The contracts stated the object, the required time, and other matters relating to their choice.

Now they set out to fulfill their job. In the case of the sign painter, he knew that his workmanship would be seen by many people. He had to use his head on color combinations, sizes of letters, and overall appearance. The fashion designer knew her work would be displayed, but I think a greater inward reward by seeing her own improvements was gained. It's not that these were such fantastic creations, but while working on a career experience, students saw themselves improve their art skills and add maturity to their work. I feel they were trying harder to reach their goal even though in most cases their job was hypothetical.

The students enjoyed this assignment very much. I had many responses that after they finished the one they had chosen, they'd like to do another one. One particular response was that even if the student would never be an illustrator for a children's book, she gained ideas, indirectly, for when she eventually would be teaching special education. There were numerous analogies like this.

My theory is - not to be too pushy, but to make information and help available because they'll think about things and make sound judgements on how art can help them and be a supplement to a career choice.

Attachment K

EXAMPLE OF ICDC USED AS INDEPENDENT STUDY

As a special project (to keep the boy from roaming the halls and missing classes) one student did the following ICDC units at the principal's direction and in a room adjacent to the principal's office.

Code No's

1111.1	Elementary Applied Principles
1111.2	Optics
1111.3	Bearings
1111.4	Aerodynamics
1111.5	Solid, Liquid, Gas Transformation
1111.7	Mountings
1112.1	Common Hand Tools
1112.2	Selected Special Tools
1113.1	Systems of Measurement
1113.3	Using the Vernier Caliper
1113.6	Using the Rule
1114.2	Large Operating Equipment
1114.3	Valves
1115.1	Vehicular Motion
1115.6	Pistons and Other Drive Mechanisms
1116.1	Connections, Fittings, and Fasteners
1117.2	Leak Detection
1117.3	Filtering
1117.4	Safety Devices and Thermostats

Attachment L

VENTURE

RANGE MANAGEMENT

Bill Turner - Mecker High School

1. Visit the Forest Service Office in our area and find out the criteria for determining the number of domestic animals allowed on National Forest Service land.

2. Check with the local ranchers, forest rangers and game wardens on the eating habits of the following:

   a. cattle
   b. sheep
   c. elk
   d. deer

3. Identify plants in your area that each animal utilizes for their stable diet.

4. Become familiar with some of the following terms:

   a. Renewable Natural Resources
   b. Unrenewable Natural Resources
   c. Energy Cycle
   d. Dominant Climax
   e. Plant Communities
   f. Plant Growth Zones
   g. Plant Succession

   All of the above should relate to your local area.

5. Review plant anatomy on the plant communities of your area. This will aid in understanding the useable percentage of the plant and factors concerned with the life cycle of the plant.

6. Set up a field trip to a National Forest or Bureau of Land Management area to observe a grazed and ungrazed allotment.

   A. Make an appointment with the range management official to accompany your group to an area that he supervises.
      1. Determine the useable plants in the plant community.
      2. Observe the techniques for determining the percentage of the plant that can be utilized and the plant still remain healthy and productive.
      3. Try to include fenced plots in your observation.
      4. Utilize any fence line contrasts that are available.

B. Hike into an area that has been grazed.
   1. Observe how the animals grazing the area are selective in their diet.
   2. Observe the areas the animals graze the hardest.
   3. Would an animal "rotation" be a good conservation practice?

C. On the hike back out observe the following:
   1. The ungrazed or resting area. Is there a basic difference in the plant community? Have the plants in the ungrazed area been allowed "to go to seed"? Could this affect the plant communities of the future?
   2. Compare the erosion problems in the two areas.
   3. Are your water sheds being protected in the grazed areas?

D. If possible, have the hike include an overnight camping venture. If a camp out is possible, it will be helpful for the following reasons:
   1. This type of learning experience will be completely new for some of the students.
   2. Students can observe natural resources first hand.
   3. The outdoors is an excellent lab for biology.
   4. The motivation appeared to be intrinsic when the field trip evolved into an over night pack trip.
   5. A recreational flavor could also create some stimulation into some other areas of biology that are in your back yard.

SUGGESTIONS FOR A VENTURE ON RANGE MANAGEMENT

We undertook the project and found out we should have reviewed the grasses and various plants utilized by domestic and game animals. Our terminology was limited during the seminar given by the forest ranger.

Some of the students had a small percentage of recall on the plant materials that we used in the seminar. The students who were able to relate with the ranger were the most attentive.

Suggestions for future use of the venture "Range Management."

1. Have a review unit on grass anatomy and physiology.
2. Have students make a mount of the most common grasses in the area explaining their range value.
3. Encourage hiking prior to your field trip.
4. Have the girls in class give a review on nutrition, and both boys and girls plan the meals.
5. See if the ranger will accompany the class on the over night part of the field trip.
6. Make sure everyone has a good pack and sleeping bag.
7. Form a buddy system for the hike. Pair a strong boy with a weak girl for physical help.
8. Consult with a wild life committee to inform the group on the nature of wildlife in the area.

MY FEELING ABOUT THE FIELD TRIP

I felt the field trip was educational and beneficial to the class. The trip, I felt, activated some of the boys' interest in the field of range management and forestry as a career.

The class gained insight into the practice of range management and the direct relationshop between range management and biology.

We also got into the area of conservation and ecology, and observed the practical application of each in our local area.

One of the things that I cannot stress too much on future field trips is proper planning. We had an excellent co-educational group that worked well together. A poorly planned and supervised overnight field trip could be hazardous for the teacher.