ABSTRACT
Clerical SOLO (Sector of Learning Opportunity), a program attempting individualized learning of concepts, skills, and attitudes traditionally taught in office practice and machines, was implemented during the 1969-70 school year by the Business Education Department of Rainier Beach High School. The Clerical SOLO curriculum model has accomplished this by providing an opportunity for a student to determine relevant learning objectives, to learn in a manner that suits him best, to learn at his own rate, and to be actively involved with the evaluation of his performance. Activities that tend to create an inaccurate self concept such as arbitrary scheduling, ability grouping, and grading have been eliminated. On the average, rates of learning increased over the semester. Students indicated a preference for the Clerical SOLO learning experience over other traditionally taught business education subjects. Instructional costs decreased by 16.7 percent even withstanding an increase of adult contact and supervision. Given that the above benefits did occur without sacrificing student achievement, the Clerical SOLO will be continued with continual refinement. (Author/JM)
A LEARNING MANAGEMENT MODEL DESIGNED TO INDIVIDUALIZE
THE LEARNING OF SKILLS, CONCEPTS, AND ATTITUDES
INHERENT IN THE CLERICAL SECTOR OF LEARNING

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A LEARNING MANAGEMENT MODEL DESIGNED TO INDIVIDUALIZE
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It is the objective of the author to write a paper which provides one possible answer to the following question: How can available resources (time, space, equipment, staff and learning materials) be best utilized and orchestrated to insure individualized learning of skills and concepts inherent in the clerical domain?

During the 1969-70 school year the Business Education Department of Rainier Beach High School implemented a Clerical SOLO (Sector of Learning Opportunity). The objective was to offer a program that individualized the learning of concepts, skills and attitudes traditionally taught in Typing (beginning through advanced), Office Practice, and Office Machines. Because the concept "individualized learning" is very complex, this paper will discuss only four of its basic components and how these components are realized in the Clerical SOLO.
LEARNING PACKAGE

The basic component of the curriculum model is the learning package. (See Appendix #1) The learning package contains (1) a concept to be learned; (2) a statement of any prerequisite learnings; (3) an objective stated in behavioral terms and written at the "mastery level" ("A" grade); (4) a list of learning opportunities classified by mode (printed, visual, or audio); (5) an evaluation section which is usually administered by the student and is always consistent with the behavioral objective; and (6) a brief aid to help the student determine what he should learn next. Each learning package consists of only one concept, thus there are a few hundred learning packages available in the Clerical SOLO.

INDIVIDUALIZATION OF LEARNING RATE

Students learn at different rates depending upon their academic background, motivation, self-concept, personal objectives and a complex array of other factors. Within the Clerical SOLO a student begins work at a point where he knows the material prior to it and proceeds at a rate that is unique to himself. This is a basic element in any type of individualized approach.

INDIVIDUALIZATION OF THE MEANS OF LEARNING

There are usually several means to learn any concept or skill. Each learning package provides a few possible alternatives which helps the student adapt his learning experience to his particular learning style. This in no way prohibits him from seeking out or
developing other means for learning the concept or skill. It is assumed that if the student has a clear understanding of what he is to learn, he may be able to learn it with little or no studying or be able to learn it in some manner that the educator did not provide. The important thing is that the student be able to meet the criteria established in the Objective. It is important to note that no matter which learning activity the student engages in, he must meet the same performance criteria as all other students who learn that skill or concept.

INDIVIDUALIZATION OF CONCEPTS OR SKILLS TO BE LEARNED

Statistics indicate that many typing student are interested in personal use skills, while others are interested in vocational skills. The Clerical SOLO makes it possible for each student to select his learning objectives based upon his needs, motivation, abilities, and academic and occupational objectives. This is true of all concepts and skills offered in the Clerical SOLO. For example: A college oriented student may wish to learn a basic typing skill of 40 wpm on straight copy, 30 wmp on number/symbol copy, complex manuscripts, outlines, and simple tabulation of columns. To this he may add the printing and electronic calculator skills (to support his math program) and a minimum of operational skill on the keypunch (to support his Fortran Programming class). From these general objectives a specific "learning program" is designed which identifies concepts and skills to be learned and a proposed sequence of learning. This learning program then becomes a guide for the student, a counseling tool for the educator manager, and a tool for monitoring the student's actual learning as it relates to proposed learning.
INDIVIDUALIZATION OF EVALUATION

An attempt is being made to make the evaluation process as valuable and nonthreatening as possible to the learner by:

1) Encouraging learners to evaluate their own performance against the criteria established in the behavioral objective. The evaluation provides immediate knowledge of results and, if necessary, the learner can modify his learning activities and immediately become involved with appropriate learning.

2) Establishing performance criteria in each objective. Because the learner is accountable for the objectives defined in his learning program and is able to compare his performance against the established criteria, he is able to be confident of success prior to engaging in evaluation activity. Where necessary, appropriate pre-evaluation materials are available to the student. Since the student is evaluated only when he indicates he is "ready", success is almost certain. In the case where he does not meet the established criteria, he returns to appropriate learning activity and attempts the evaluation at a later time. At no time is a failing mark recorded on the student's record.

3) Recording only "A" grades. Each behavioral objective is written with "mastery level" criteria ("A" level) thus each time a student meets the criteria an "A" is recorded for that unit of learning. However, each unit of learning, or learning objective, is assigned a credit value (based on its relative weight in the traditional program). This credit value is stated in percentage form. For instance, learning package E-23 is assigned a credit value of 3% of the semester credit.
At the end of each grade marking period all credit earned is tallied and the student's report card shows a grade of "A" and the amount of credit earned (0.75).

The above-mentioned procedures make it possible for a student to experience success during most evaluation situations, and he is in no way punished (by a low or failing grade) if he doesn't succeed. This maximizes the effect of success and minimizes the negative effect of non-success. The "A" grade and partial credit system is looked upon as only an interim step until letter grades and credits can be eliminated entirely.

LEARNING MATERIALS

It is important to note that the learning packages and this learning management model differ from some other recently developed programs. Very little new instructional material has been developed to support this particular program. The program uses available published materials and materials previously developed and used by Seattle teachers to teach traditional classes.

STAFFING

The shift from teaching to the management of the learning process has provided an opportunity to analyze tasks and functions and alternative ways to use adult staff. The staff in the Clerical SOLO consists of two educator managers, one instructional assistant and one service aide.
The educator managers are responsible for aiding each student in the selection of relevant, challenging learning objectives; identifying program components which relate to each learner’s objectives; evaluation and communication of student progress; and teaching individual students. The instructional assistant is responsible for assisting students, supervising evaluation, keeping records, and generally maintaining a positive rapport with the learners. The service aide keeps records, provides learners with learning and evaluation material, supervises production activities, instructs and supervises the learning of duplicating and copying equipment, and supervises student assistants. These four adults effectively manage the learning and environment of up to 93 learners at any one time.

FACILITIES

To create the necessary facilities at minimal costs, one wall was removed connecting a typing room with an office machines room. Furniture and equipment was then arranged to best use the available space.

COST-EFFECTIVE-ANALYSIS

For the 1969-70 school year the Clerical SOLO program increased enrollment, decreased student-adult ratio, eliminated scheduling conflicts for all clerical subjects, and decreased instructional costs per student-credit hour by 16.7%. (See Appendix #2.)
CONCLUSION

The Clerical SOLO curriculum model has personalized the learning of clerical skills, concepts and attitudes by providing an opportunity for a student to determine relevant learning objectives, to learn in a manner that suits him best, to learn at his own rate, and to be actively involved with the evaluation of his performance. Activities that tend to create an inaccurate self concept such as arbitrary scheduling, ability grouping, and grading have been eliminated. On the average, rates of learning increased over the semester. Students indicated a preference for the Clerical SOLO learning experience to other traditionally taught business education subjects. Instructional costs decreased by 16.7% even withstanding an increase of adult contact and supervision. Given that the above benefits did occur without sacrificing student achievement, the Clerical SOLO will be continued with continual refinement.
SKILL: Touch typing the p, v, and , (comma)

PREREQUISITE: A-6 or equivalent

OBJECTIVE: Given two 2-minute timed writes from material which contains all letters so far introduced, you will be able to produce at least one copy at 20 wam with two errors or less with no proofreading errors.

LEARNING OPPORTUNITIES: Please check the mode or modes that you use to meet your objective.


Visual: ☐ 1. View and follow the video replay of the teacher-led presentation.

Audio: ☐ 1. Follow the teacher-led presentation.

SELF EVALUATION: Type two 2-minute timed writes from the 20th Century Typewriting text, page 20, Part FF, Lines 1-5.

Did you type 20 wam with two errors or less and no proofreading errors?


☐ NO - Select another Learning Opportunity and evaluate your work again.

☐ Proofread by Clerk.
# COST EFFECTIVE ANALYSIS

<table>
<thead>
<tr>
<th>TIMES CLASS OFFERED EACH DAY</th>
<th>1968-69</th>
<th>1969-70</th>
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<tbody>
<tr>
<td>OFFICE PRACTICE I &amp; II</td>
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<td>6</td>
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<tr>
<td>OFFICE MACHINES I &amp; II</td>
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</tr>
<tr>
<td>TYPEWRITING III</td>
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</tr>
</tbody>
</table>

1968-69 | 1969-70

AVERAGE STUDENT-EDUCATOR RATIO  
(Total student credit hours divided by total educator classroom hours)  
20.8 - 1  33.7 - 1

AVERAGE STUDENT-ADULT RATIO  
(Total student credit hours divided by total educator and paraprofessional classroom hours)  
20.8 - 1  16.1 - 1

STUDENT-SEMESTER-HOURLY INSTRUCTIONAL COST  
(Total salary cost of adult staff per classroom hour divided by average hourly student enrollment)  
$50.34  $42.22

NET DECREASE IN INSTRUCTIONAL COSTS  
(Difference between 1968-69 and 1969-70 costs divided by the 1968-69 costs)  
16.7%