The paper describes ways in which mainstreamed special education students can engage in individual assignments to master course content. The activities include developing a word parts dictionary which addresses prefixes, roots, and suffixes of the subject area; highlighting the textbook to sort out main ideas, vocabulary words, and supporting details; providing tapes of selected parts of each textbook chapter; taping without a text to reinforce class lectures; obtaining low readability texts; rewriting portions of the text; and using low readability summary cards. Such individualized activities lessen the amount of pull out time required and, once developed, can decrease teacher preparation time. (CL)
Seven Individualized Reading and Study Strategies for Mainstreamed Students in Content Area Classes

In keeping with Public Law 94-142, mainstreamed special education students are provided with an Individualized Educational Program. Typically, the IEP stipulates curricular and instructional adaptations that are to be made in the students' course of study. Often, in practice, these changes include allowing more time for the student to complete tests and assignments or not grading students for spelling and the mechanics of writing. As many teachers put it, the "theory is that we regular teachers should adapt our course presentation so that mainstreamed youngsters can learn."

Unfortunately, too often the professional literature on mainstreaming recommends teaching methods that are too complex, involve too much record keeping or are impractical for the junior or senior high teacher who instructs 150 or more students daily.

Here are 7 individualized learning strategies for mainstreamed students. Although mainstreamed youngsters can learn in whole-class and small-group settings, their achievement can also be enhanced through individualization. The strategies that follow are not "individualized" in the sense of being tailor-made for unique student needs. Rather, they are individual assignments mainstream students can engage in to master course context.

1. **Word Parts Dictionary:** Often, mainstreamed students have difficulty with new vocabulary because they lack structural analysis skills. A *Word Parts Dictionary* (Piercey, 1982) provides an individual reference to the essential prefixes, roots, and suffixes of the subject area.
First, identify the prefixes, roots and suffixes that students need to know to understand the vocabulary of the subject area. Second, alphabetize the word parts and put them into booklet form, the word part in the first column, its meaning in the second column, an example in the third column, and a blank column for the student's own examples.

Dictionary Format:

<table>
<thead>
<tr>
<th>Root or Affix</th>
<th>Meaning</th>
<th>Example</th>
<th>Your Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>aero-</td>
<td>air</td>
<td>aerodymanics</td>
<td></td>
</tr>
</tbody>
</table>

Note that the word part can be identified as prefix, root or suffix by where the hyphen is placed. The Word Parts Dictionary should be reproduced on paper no larger than the textbook so that it can be kept in the student's text for quick reference. Good quality mimeographing or other black printing and a colorful cover make the booklets attractive to students.

Third, introduce the Dictionaries with an activity that will show students the usefulness of knowing word parts. For example, when introducing the Dictionary to the whole class, use the chalkboard or overhead projector to display a few difficult words. Break the words into parts and have students look up the meaning in their Dictionaries. Have volunteers derive the meaning of the whole word.

Fourth, after introducing the Dictionaries, provide the students frequent opportunities to use them in class.

Through the one-time effort of preparing the Words Parts Dictionary, the teacher will not only help mainstreamed students read and understand the unique vocabulary of the subject area, but will also improve their ability in general to see meaningful parts of words.

2. Highlighting: Highlighting the textbook can help the mainstreamed student by cutting down on the awesome amount of reading that must be done and by isolating key words, concepts and important details which are difficult for such students to identify. Using different color pens for highlighting will help the student sort out main ideas, vocabulary words and supporting details.

First, reserve one or two clean copies of the text for the use of mildly handicapped students. You will probably want to keep these books on reserve in the classroom rather than risk their being lost by individual students.

Second, for each reading selection, identify the main points you want the students to learn; highlight these in red.

Third, identify important vocabulary and highlight these terms in blue.
Fourth, select important supporting details, such as names and dates, and highlight these in yellow.

Fifth, allow mainstreamed students to do their reading from these highlighted texts in class, in study halls, or on a check-out basis to prepare for tests.

Before color-coding, you may want to check with special education personnel and other subject area teachers to see if anyone else is using this method. If so, it would be important to use the same color system to avoid confusing mainstreaming students.

3. Selective Textbook Taping: For some mainstreamed students who are slow readers, reading all the assigned pages is an impossible task. Likewise, having to listen to an entire text on tape is needlessly time consuming. In the latter case, the mainstreamed student may have too much difficulty sorting through the details to arrive at main ideas.

A time-efficient compromise is to provide tapes of selected parts of each textbook chapter.

First, in one clean copy of the textbook, underline only essential details and main ideas. Put numbers in the left-hand margin so that the students can more easily keep their places while listening to the tape.

Second, tape the underlined parts of the chapters, being sure to introduce each section with the number from the margin. Try not to read at too fast a pace, but do not forfeit expression.

Third, always check the quality of the tapes before using them with students.

Fourth, as each section of the chapter is assigned, arrange time (perhaps during study hall or in the resource room) for the students who need this help to listen to the appropriate tape while following along in the text.

For the subject area teacher with little time for making tapes, it may be worthwhile to ask for help from the special education staff, aides, or community volunteers. This one-time effort will produce a valuable resource for mainstreamed students that can be used so long as the particular text is in effect.
4. **Taping Without a Text:** An alternative to selective taping from the textbook is taping without a text. A lecture on tape can be used to reinforce what the student is learning from class lectures. In addition, since many mainstreamed students are distractible in group situations, a private lecture on tape can go far to fill in the gaps from classroom presentations.

*First,* construct a key word outline that students will use while listening to your tape.  
*Second,* refer briefly to the numbers and letters of the outline as you talk on the tape about each of the main concepts which you have identified by key words.  
*Third,* following presentation of a unit in class, arrange times for mildly handicapped students to listen to the corresponding tape while following the printed outline.  
As with selective textbook taping, the preparation of these mini lecture tapes is a one-time effort; once prepared they can be used repeatedly.

5. **Low Readability Texts:** Many publishers of educational materials are producing good quality, low readability texts in science, history, social studies, health, etc. The content of these texts closely parallels the standard content of subject area classes. Check with your school's resource room teachers to see if these adapted texts are already available. If not, use some of your budget or ask for special funds to purchase a few copies of the better publications. Sources for these materials can be found in professional journal advertisements and reviews, through publisher's representatives at professional conferences, and in publisher's catalogues (such as Prentice-Hall, New Readers Press, Quercus Corporation, and J. Weston Walch). Graves, Boettcher, and Ryder (1979) have provided descriptions and evaluations of book series for middle school or upper grade students. In your classroom these materials can serve as the primary reading material for mainstreamed students, or
they can be used for enrichment and as references when mainstreamed stu-
dents need to prepare reports or class projects.

6. Rewrite Portions of the Text: This strategy is usually too time-
consuming for the average content area teacher. However, by giving the
directions that follow to a teaching aide who has adequate knowledge of
the subject matter, "text rewrites" can be a realistic and effective
option.

General suggestions

1. Use a primary typewriter, or triple-space with a regular typewriter.
2. Don't put too much on a page. Remember, there are no pictures
to carry the story or idea.
3. Be careful with hyphenation. It is better not to break words
at the end of a line, e.g., "disappoint" -- use whole word, not
"dis-appoint."
4. When a sentence is more than one line, try to break at a place
where the meaning flows along easily.
Example

The boy went out to the corral
and picked up a lamb.

Not: The boy went out to
the corral and picked up a lamb.

Readability

1. Keep the sentence structure and the paragraph structure simple.
   As a rule of thumb, write sentences with 8-12 words. However,
bear in mind that some longer sentences can be "easier" because
relationships among concepts are more explicit. For example, the
sentence "Since Juan completed his chores, his mother let him go
to the soccer match." expresses an explicit causal relationship,
where as "Juan completed his chores. His mother let him go to the
soccer match." requires the reader to read beyond the literal level.
2. Use many personal words. In very easy reading, about 19 or more
   personal references (I, me, you, they, she, etc.) occur per 100 words.
3. Use verbs. Nothing is as simple as a brief three word sentence that follows this pattern: Somebody does something. It's the verb that gives life to any sentence.

4. Try to avoid too many affixed words (prefixes, suffixes, inflectional endings).

For more information about "rewrites," consult Craig's (1977) "If It's too Difficult for the Kids to Read—Rewrite It!"

7. **Low Readability Summary Cards:** This method is similar to Taping Without a Text (see strategy 4 above). However, its objective is to produce meaningful reading material for the mainstreamed student.

   **First,** for each subject area unit, construct a key word outline, just as you would for the Taping Without a Text strategy. Type the outline on a 5 x 8 card or card stock cut to whatever size you want. Use a primary typewriter, and leave plenty of space between lines.

   **Second,** summarize the information relating to specific topics in the unit. The summaries could be based on section of the textbook. Control the readability of the summaries by following the guidelines under "Re-Writing the Text." Type each summary on a separate card, using primary type and double or triple spacing.

   **Third,** laminate and store them with the outline so they are easy to keep in order and are accessible to students.

   **Fourth,** allow mainstreamed students to use the cards whenever they like for review, reinforcement and to prepare for tests.

   These summary cards will be a permanent asset for helping mainstreamed students who read slowly and/or have difficulty isolating in concepts.

**Individualized Learning: In-Class vs. Pull-Out Experiences**

When mainstreamed students experience difficulties in content area classes, they are typically "pulled-out" and assigned to the resource rooms. However, when assignments are individualized in keeping with some of the strategies we have presented here, the "pull-out" solution can be resorted to less frequently. Teacher time is involved in the
preparation of these 7 individualization strategies and they are not panaceas. Once they are prepared, though, they can be used with other mainstreamed students in subsequent years.

Teachers who cannot find the time to implement one or more individualization strategies can ask resource room teachers, paraprofessional aides, or community volunteers to prepare a number of the strategies suggested here. If this is not feasible, workable alternatives would be the implementation of various whole-class (1985) and small-group (1985) strategies that have been suggested recently in the professional literature.

References

