

FOCUS ON EXCEPTIONAL CHILDREN

A Systematic Approach for Changing Materials, Instruction and Assignments to Meet Individual Needs

Rosemary Anne Lambie

The ultimate purpose of changing existing curricular materials, instructional practices, and assignments is to meet the student's academic, emotional, and physical needs. When the student is not achieving at his or her expected level, three different types of changes can be made: adaptations to the actual commercial product or material; modifications in the manner of delivering instruction; and/or alterations in the nature or scope of the specific assignments. Each of these three variances requires that the teacher change existing practices. They may be combined and do not always have to be planned as singular efforts to meet individual needs.

The value of changing existing practices has been documented by research. Edwards (1977) found that changing a curricular approach for fourth-grade students with undesirable conduct resulted in significantly higher percentages correct on examinations. Materials and assignments were changed to meet each student's needs. The changes included audiotapes of the text, learning centers with nonreading tasks, and simplified worksheets to increase probability of successful responding.

A study by Lovitt and Curtiss (1968) investigated the effect of altering an assignment on correct response rate in arithmetic problems. The alteration involved verbalizing prior to making a written response rather than the existing requirement of only writing the response. Results indicated that the subject's error rate decreased and correct answers increased as a result of that alteration.

Harris (1972) investigated the effect on correct spelling responses under two conditions. One group of fifth-grade students received the regular approach. The experimental group received a modified approach that incorporated daily goals and immediate feedback concerning performance. As a result of the modification, the experimental group approximately doubled its correct spelling rate over baseline.

The preceding three studies suggest that changes in existing practices could be justifiable. In addition to research, a national needs assessment was completed through the U.S. Bureau of Education for the Handicapped (Vale, 1980). One finding was that

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49 percent of the teachers sampled thought training in how to adapt media and materials would be of great value. An additional 39 percent thought it would be of some value. Thus, both the perceived need of teachers and the success found in implementing certain changes support the basic value of the methodology presented here.

Planning for the three types of changes defined in this article should be based upon the specific mismatch of the learner with material, nature of instruction, or assignment. The mismatch is not always unique to the individual. It may be a result of inadequately designed material — in which case the teacher may find many students with the same mismatch. More frequently, though, the teacher finds that students vary individually in their responses to existing materials, method of instruction, or assignments.

The basic premise of the systematic approach presented here is that teachers must determine the type of mismatch that exists, then adapt materials, modify instruction, or alter assignments based upon that determination. Although a listing of "101 changes" may seem desirable to some, the author contends that teachers do not necessarily know when to select which type of the three changes for a specific mismatch. A systematic approach should provide teachers with a framework for facilitating the change process.

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REASONS FOR CHANGING EXISTING PRACTICES

As stated initially, the ultimate purpose in changing materials, instruction, and assignments is to meet individual student needs. Other reasons are:

- to avoid having to "reinvent the wheel," and still reach satisfactory solutions. Teachers, sensing inadequacies of materials, often set for themselves the difficult task of constructing what they hope will be the perfect match between learner and material. Not much can be gained in the long run from this laborious and defeating task. Needless to say, teachers have many additional tasks with which they must be concerned. Changes to existing materials and instruction represent an expedient alternative to teacher-made materials. Often simple adaptations will greatly improve upon learner/material match, at the same time freeing the teacher's time for equally important responsibilities.
- to enable students to remain in the least restrictive environment. Pupils are frequently referred for more restrictive placements because they are unable to keep pace within particular environments and settings. Changes based upon identifying specific mismatches may permit the student to remain in the same environment and be able to achieve success — albeit to the beat of a different drum.
- to stretch budget dollars. A limited budget for new instructional materials is a perennial problem for teachers. Sometimes, through a relatively simple change process, the teacher can use already purchased materials to meet students' needs. Adapting, modifying, or altering is far more economical than buying the variety of materials necessary to meet the needs of each student.

EXAMPLES OF THE THREE TYPES OF CHANGES

Most changes in the teaching process fall within the realm of adaptation of materials, modification of instruction, and alteration of assignments. To clarify the differences among these types of change, examples of three different mismatches relating to the same arithmetic assignment are given here. A change procedure is

presented for each mismatch. The assignment requires that students complete 30 two-digit addition problems in 20 minutes.

Adaptation of Materials

A behavior disordered student, Chris, found a whole worksheet containing 30 arithmetic problems too threatening. The teacher noticed Chris' avoidant reactions when observing that he was five minutes into the assignment and had not yet completed the first problem of the 30 assigned. The teacher asked Chris if he needed assistance. He replied that there were too many problems to do.

Although a teacher might choose to counsel such a student concerning the perceived threat of solving the 30 problems, he or she might also consider a more expedient strategy involving materials adaptation. The teacher could cut the page in half or in quarters and present only one portion at a time during the 20-minute period. In subsequent drills the teacher could gradually increase the number of problems presented at one time. The student would still complete the same number of problems but in smaller, less threatening blocks. The instructional practice does not change. The nature and scope of the assignment do not change. The only change is in manipulating the commercial product.

Modification of Instruction

A learning disabled student, Pat, failed to learn addition of two-digit numbers when the basal program did not utilize manipulatives. The student was given the 30 arithmetic problems without prior instruction. The five examples provided at the top of the worksheet were assumed ample to allow the student to complete the page. Pat attempted the problems, but the teacher noticed halfway through the worksheet that all the answers were incorrect. When the teacher asked Pat if she needed assistance, the girl said that the examples at the top of the page were not helpful enough when trying to solve the problems.

In this example the teacher could modify the manner of instruction by providing a place value chart and giving direct instruction along with it. A commercial product is involved, but the basic change is with the nature of instruction. The commercial product is not adapted. The assignment is not altered. Rather, the instructional practice is modified.

Alteration of Assignments

An educable mentally retarded student, Tim, worked more slowly than most students in the class and did not complete the 30 arithmetic problems within the stipulated 20 minutes. Observing the student's slow pace, the teacher did notice that Tim was correctly completing each problem. When asked if he needed assistance, the boy informed his teacher that he was just a slow worker.

In that case the change might focus upon altering the assignment of this individual student. The teacher could require the student to complete only 15 of the 30 problems. In doing so, the instruction is not modified and the commercial product is not adapted. The student's assignment, however, is altered to meet an individual need.

These three types of changes that teachers can apply are often combined. Teachers frequently find that materials adaptation has to be combined with modification of instruction or alteration in the assignment. With the arithmetic assignment of the preceding examples, a student might be unable to learn two-digit addition without manipulatives and also could be threatened by too many problems to complete during a 20-minute time period. Then, the teacher might modify instruction by providing a place value chart and adapt the material by cutting the page in half for the 20-minute drill — thus combining two types of changes.

POINTS TO CONSIDER BEFORE MAKING CHANGES

Prior to making a change, the teacher should consider several facets of the total learning process. Possibly, a change involving other than the material, instruction, or assignment is indicated. The following variables should be investigated and eliminated as possible agents of failure before instituting changes of the type advocated.

1. *Sensory acuity.* A student's lack of success in learning may be directly related to visual or hearing problems. In some cases eyeglasses or hearing aids may be all that is needed to turn failure into achievement.
2. *Level of functioning.* If a sixth-grade student is functioning at the fourth-grade level in arithmetic, any changes to sixth-grade materials, instructional procedures, or assignments are inadequate and insufficient. The student must have the necessary

prerequisite skills to function successfully at the sixth-grade level. No amount of change at the sixth grade level allows that student's needs to be fully met. Mismatches between a student's level of functioning and the grade level placement must be investigated as possible causative factors before instituting changes like those advocated in this article.

Related to this concept is that of readability level of instructional materials. The stated readability level of a product is not always the actual readability level. The teacher might apply a readability formula to a material to ensure selection of the appropriate readability level.

3. *Environmental factors.* Factors including lighting, noise level, and proximity of students to any type of distraction must be considered before deciding to institute changes in materials, instruction, or assignments. When environmental factors are found to be causative agents of failure, these elements must be restructured to maximize the learning process. Then the teacher may turn to other adaptations, modifications, and alterations if necessary.
4. *The consequences applied and the contingency or arrangement between the desired response and the consequence.* Adapting materials, modifying instruction, and altering assignments will not work if the cause of failure to learn relates to the contingency or consequence. In the earlier example of the behavior disordered student, assume that there were no mismatch (i.e., the 30 problems were really not too threatening) but that the student knew when he finished the 30 problems he would have to undertake a reading assignment he detested. If, instead of doing reading after the arithmetic, the student would have had the consequence of constructing a model airplane (a highly preferred activity), he would have been more likely to begin and complete the math problems. The difficulty, under that assumption, was not a mismatch of learner with material presented but was related to the contingency of completing the problems.

In the earlier example of the EMR student, assume that a mismatch did not exist (i.e., 30 problems were not too many). Also assume that the consequence was powerful (e.g., extra recess time) but that the student simply needed more time to complete the assignment. If the student were given 30 minutes instead of 20 to complete the worksheet,

a change would have been made in relation to the contingency. This would not require altering the assignment, modifying the instruction, or adapting the material, but simply changing the contingency or time arrangement between the response and the consequence.

Each of the preceding factors must be explored and eliminated as causes of failure to learn before considering any of the changes discussed here. When those four factors have been resolved or ruled out and a student still fails to learn, the teacher should look for the possibility of a mismatch between learner and antecedents (material or instruction provided) or with the response required. Specific mismatches should be identified and followed by systematic changes in existing practices.

GUIDELINES FOR MAKING CHANGES

Some basic guidelines are necessary in actually planning and implementing changes in materials, instruction and assignments. Several suggested guidelines are discussed briefly.

- *Use the change process only when a mismatch occurs.* Although implementing change may seem like an interesting process, it should be done only if a mismatch exists between the learner and material, instruction, or assignment. And it should not be undertaken unless all of the prior considerations are eliminated as causative factors in the pupil's lack of learning. This means that the teacher must be certain of no sensory acuity or classroom arrangement problem, that the presentation and requirement are at the student's current level of functioning, and that effective contingencies and consequences are being carried out. Only then should the teacher consider mismatches of materials, instruction, or assignments with the learner.
- *Keep the changes simple.* Elaborate changes may seem pedagogically sound, but teachers should focus on the simplest change process possible that is still effective and efficient. When changes are too involved, they destroy a major advantage of the change process in that time expenditure becomes magnified.

Figure 1 illustrates, through a student's worksheet, an example of a student/material mismatch. The directions required that students discover a pattern for each horizontal line and fill in the appropriate numbers. For example, the correctly completed top line should read: 2,

2	4	<u>100</u>	_____	<u>104</u>	12
<u>3</u>	100	101	_____	103	<u>13</u>
5	_____	<u>102</u>	_____	25	<u>14</u>
95	_____	_____	98	<u>26</u>	100
<u>96</u>	10	<u>19</u>	20	25	<u>101</u>
25	<u>11</u>	<u>41</u>	40	<u>26</u>	50

Figure 1

Example of an Incorrectly Completed Worksheet showing a Mismatch between Learner and Material

2	4	<u>6</u>	<u>8</u>	10	<u>12</u>
99	<u>100</u>	101	<u>102</u>	103	<u>104</u>
5	<u>6</u>	<u>7</u>	<u>8</u>	25	<u>26</u>
95	<u>96</u>	<u>97</u>	98	<u>99</u>	100
5	10	<u>15</u>	20	25	<u>30</u>
25	<u>26</u>	<u>27</u>	40	<u>28</u>	50

Figure 2

Example of Student Worksheet showing Improvement after a Systematic Change Process

4, 6, 8, 10, 12. After looking at the student's worksheet, the teacher diagnosed that the mismatch related to the student's misunderstanding the directions and confusion about directionality. He had tried to form sequential number patterns in all directions, including bottom to top and right to left.

The teacher in that example would have a variety of options to consider in eliminating the mismatch, including: (a) drawing arrows between lines and numbers (adapting material); (b) providing a correctly completed sample (adapting material and modifying instruction); (c) giving oral instruction concerning left to right and top and bottom (modifying instruction); (d) providing a tachistoscopic sheet allowing the student to see only one line at a time (adapting material); or (3) supplying a ruler for the student to move down the page one line at a time (adapting material).

In selecting the change, the teacher should look toward the process that would most expediently eliminate the mismatch and result in student success. Simply giving the student a ruler would be expedient, but he or she probably would not know what to do with it and, thus, would likely continue to do the assignment incorrectly. If, however, the ruler were supplemented with teacher instruction and demonstration, the combined change might result in success. If not, a tachistoscopic window could be introduced in place of the ruler. Each of the above options is potentially workable and simple.

A major advantage of simple changes is that they require little teacher time to plan and implement. The best change is one that is quick and easy and also leads to student success.

- *Confirm mismatches by evaluating changes made.*
The teacher should take data to determine if the

change was appropriate. The hypothesis concerning the mismatch and a solution is confirmed when the data show that successful learning has resulted. If the data indicate that the student's need was not met, the teacher should systematically vary the change until achievement is realized.

In the example of Figure 1, assume that the teacher were to introduce use of the ruler along with oral explanation. Figure 2 illustrates 66 percent accuracy on the same worksheet when employing this change. When analyzed using the diagnostic process to determine type of error, the responses on Figure 2 show that the student indeed benefited from the change. But the student did not correctly insert numbers in the 5s sequences unless at least two of the numbers were present initially in the sequence.

In this case the teacher could choose to write those numbers into the sequence (adaptation of material) or instruct the student on how to look at the whole sequence before attempting to write the answers (modification of instruction). By using a diagnostic process and systematically varying the change, the teacher maximizes the probability of meeting individual needs.

- *Minimize teacher time in making changes.* Teachers should not spend too much time on planning or manipulating changes. Change processes that are effective while requiring the least teacher time are desirable. If two or more possible solutions appear to be equally good, selection should hinge upon the change that requires the least teacher time. Teachers should also keep in mind the possible utilization of supporting personnel. For example, cross- or peer-age tutors may be able to help monitor and explain requirements; parents or volunteers might be asked to assist in change processes involving making materials more durable, rewriting information in a different format, and audiotaping lessons.
- *Keep combinations consistent.* When trying to supplement a program or material that does not allow for enough practice, be sure the supplementary material is compatible with the basic approach. For example, a teacher would not want to use initial/teaching/ alphabet materials to supplement the basal reader. In the same manner, a non-inquiry text approach in science should not supplement an inquiry approach. Supplemental materials that differ in basic instructional approach can cause a great deal of confusion in verifying the type of mismatch

that exists and the solutions attempted (e.g., supplementary material). On the other hand, a supplementary material that is consonant with the basic approach might be effective.

- *Know the strengths and weaknesses of the instructional material.* If the teacher is aware of the strengths and weaknesses of materials, mismatches with students are easier to identify. For example, if a company tends to publish worksheets with confusing directions, the teacher might guess ahead of time what problems might occur. One product with specific weaknesses presents four different arithmetic operations on one page, gives few examples, and has no illustrations. Knowing this, the teacher can mentally plan for mismatches and can easily make a change if students have difficulty in completing the work satisfactorily.

- *Know the pupil's strengths and weaknesses.* When the teacher is aware of students' strengths and weaknesses, mismatches are easier to identify, as are the types of solutions that might be applied. For example, if the teacher knows that a certain student has difficulty in oral spelling from dictation, a visual written response mode may be indicated.

One student had considerable difficulty in verbalizing that 167 is greater than 159. She also had difficulty remembering the signs $<$ and $>$. Knowing this, the teacher changed the response mode (alteration of assignment). The student used the same worksheet but was asked to put an X on the larger number in each problem on the worksheet.

The teacher also benefits from knowing if a student is impulsive or deliberate or has other such characteristics. Sometimes style interferes with learning, and not the material, instruction, or assignment.

QUESTIONS TO ASK IN FACILITATING THE CHANGE PROCESS

Changes in existing practices should be based upon specific mismatches between the learner and material, instruction, or assignment. Systematizing the change process, to maximize the probability that a change will be more effective than existing practices, is accomplished through a questioning or empirical approach. The teacher poses a variety of questions as possible causes of mismatches between learner and materials, instruction, or assignments, then considers tentative solution(s) to the

mismatches. Selection of the type of solution (adaptation of material, modification of instruction, or alteration of assignment) is based upon economy of teacher time and probability of eliminating the mismatch. The teacher then systematically varies the change until the mismatch is corrected.

The following questions relate predominantly to antecedents of the instructional process although some relate to the nature or scope of the response required. Each question is followed by hypothetical mismatches and possible solutions to these mismatches.

The key to successful use of the change process is in asking questions that lead to discovery of the type of mismatch that exists. The mismatches and possible solutions presented here are intended to assist teachers in understanding the process by which solutions are planned. They do not represent an exhaustive listing of possible changes but, rather, a sample or cross-section of situations often encountered. The potential solutions are not necessarily the only or best answers, but show some of the options that may be considered.

1. What if there are too many (items, pages, questions, etc.)?

A frequent problem that students face is the "too many" requirement. Two examples are given along with potential solutions.

Too Many Math Problems

The teacher notices that a student does not complete all the assigned math problems in the time allotted. The problems that are solved are correct.

— *Adapting the Material/Altering the Assignment:* The teacher cuts the page in half so the student will not have to complete all the problems. This is a quick and easy alternative but may not represent the most optimum solution. If, as in most practice worksheets, the problems are arranged from easy to difficult, the student may end up with an inaccurate representation of the total assignment. A brief analysis of the material would reveal if this were the case. If not, that solution could be judged worth trying.

— *Adapting the Material/Altering the Assignment:* The teacher selects the problems the student needs for practice, then stars the ones judged most valuable. This is a quick and easy change that takes into account the student's needs and provides a balance from among the total worksheet problems.

— *Altering the Assignment:* The student is asked to do all the odd or even problems. Again, the teacher first has to assess the worksheet to determine what effect this solution will have in relation to worksheet requirements and student needs.

Too Many Pages to Read

A student does not complete all of the silent reading assigned in social studies.

— *Altering the Assignment/Adapting the Material:* The teacher tape records every other page. The student reads one page silently, then listens to the next page. The major change is in the assignment required of the student, as he or she is now required to read only half the amount. It also utilizes another learning modality (auditory).

— *Altering the Assignment:* A similar alteration is to have a peer- or cross-age tutor read every other page to the student. This may be a long and laborious process and requires a more able, patient student to be paired with the slow learner.

2. What if there is not enough repetition?

This is a major concern when using some developmental materials. Without necessary practice and drill, students with learning problems can easily fail to fix the concepts and skills necessary for retention.

Too Little Problem Solving

After students have been taught a new computation skill, they need enough practice to fix it in their minds before building additional skills. Some texts and materials provide too few practice problems.

— *Altering the Assignment:* The teacher supplements the assignment with materials that cover the same skill and allow extra practice. For example, kits graded and organized for practice according to specific skills can be used to provide the necessary repetition of skills. Although materials are involved in doing this, the real change is in the scope of the assignment. The student is required to do more. This solution is quick and easy. It meets student needs, yet requires little teacher time. A drawback, however, may stem from the budget for materials.

— *Altering the Assignment/Adapting the Material:* The teacher makes worksheets to provide for extra

practice. Or the teacher makes transparencies, which are then projected on the blackboard. These solutions are not quick and easy, though. The teacher expends considerable time in constructing the change, even if older students or volunteers assist. Other solutions may be better.

3. What if a lack of feedback results in problems when students use the material independently?

A major consideration in teaching is that of uninterrupted direct instruction of small groups of students. That necessarily requires that some students who are not at the level of the group receiving instruction must work independently at times. As a result, the independent learners may suffer from a lack of immediate feedback.

No Feedback Provided

The student cannot confirm answers and therefore has difficulty in building skills and concepts upon known information.

— *Adapting the Material:* The teacher writes the answers directly in the workbook or text in yellow ink. Before looking at the page, the student places a transparent red plastic sheet, like a theme cover, over it, which neutralizes the answers. The student writes answers on a separate sheet of paper one at a time, after which he or she un.masks the correct answers to see if they match. This is a fairly quick and easy process when only a few students and books are involved.

4. What if the visual presentation is too confusing?

A frequent problem of students — that of focusing on the pertinent elements of visual presentations — sometimes must be facilitated by teachers. Generally, the problem centers on lack of attending to significant detail.

Visually Too Confusing

At times students are given worksheets requiring a variety of responses (e.g., fill in the blank, write a sentence) on one page. This can be confusing for some students.

— *Adapting the Material:* The teacher makes a tachistoscopic window to reveal only a portion of a page at one time. A piece of construction paper is cut such that the right sized window reveals one item at a time. This is a quick and easy adaptation of the commercial product if items are all of the same dimensions.

Confusing Transparencies

Sometimes, commercially prepared transparencies are confusing. Students may have trouble focusing on significant details.

— *Adapting the Material/Modifying the Instruction:* The teacher uses carefully cut masks like that described above to focus students' attention on the unmasked stimuli. The teacher also could simply provide a piece of paper that is to be moved downward one line at a time, thereby restricting the detail to which the student is exposed.

5. What if students do not remember or understand the directions?

Many students have difficulty with oral and/or written directions. The teacher should determine if the directions are the sole problem or whether the lesson is too difficult.

Problem with Oral Directions

Teachers frequently give oral directions in class. Some directions require a relatively long attention span as well as good short-term memory. Some students do not recall the sequence or detail of oral directions.

— *Modifying the Instruction:* The teacher tape records directions. These may be expanded, if necessary, with added steps for students who require more detail and smaller increments.

— *Modifying the Instruction:* The teacher appoints a peer tutor to coach students through step-by-step directions. Peers often "speak each others' language" better than the teacher and can more quickly clarify misunderstood directions.

Problem with Written Directions

Written directions may be difficult to understand or follow. The problem may not be with memory in these cases, but with confusion in trying to determine the logical breakdown and sub-steps or increments.

— *Adapting the Material:* When worksheets have paragraphs containing multiple directions, a teacher uses colored dots or numbers to differentiate the separate directions. Each paragraph contains several sentences, and students benefit from knowing where one direction ends and another begins. Thus, they are led to complete one step before starting the next.

— *Adapting the Material:* In a similar circumstance, a teacher uses colored marking pens or pencils, underlining each direction with a different color. This is not as quick and easy as the above adaptation but may be better for younger students.

6. What if the material, lesson, or assignment is not interesting?

Not all things we do in schools or in life have inherent interest. Students should not be deluded into expecting everything to be interesting. At times, though, boredom and sameness reach limits and teachers should turn to forms of motivation.

Oral Lesson Drags

Teachers provide considerable oral instruction in classes. At times the lessons may be boring, yet necessary. For example, teaching parts of speech can be uninteresting to students.

— *Modifying the Instruction:* Teachers use a variety of techniques to make lessons more interesting. Puppets increase interest among younger students. The teacher's personality also makes a big difference. One's voice can elicit a great deal of responsiveness from others. And teachers can point out the relevance of the lesson to students' interests or goals.

Boring Seatwork

Much student seatwork is inherently boring. Teachers tend to drown students in a sea of purple ink that often results in ennui and restlessness. To combat this, teachers can use interest inventories with students as an aid in selecting materials.

— *Modifying the Instruction:* One motivating solution to the boredom dilemma sometimes is found by introducing self-competition. For example, the work is clocked so the student is able to chart progress in correctly completing items within specified times.

— *Modifying the Instruction:* The student is instructed on how to keep data on performance and how to record the results in an interesting way (graphs, charts, using color, and so forth). Self-recording of performance is a relatively quick and easy option. Although it is not effective with all students, it represents a definite possibility in eliciting task behavior of otherwise turned-off students.

7. What if the product is not durable?

This may be a concern, especially with behavior disordered children. Some pupils tear up instructional materials, rendering them useless. Not all material can be made durable, but it is a factor worth considering. Most important is to make sure that the material used will meet student needs, *then* figure out if it can be made durable. Devising durable material that is unsuitable, of course, is wasted effort.

Paper Product is Destroyed

Some students rip, tear, and otherwise mangle instructional materials. Replacing destroyed materials can be expensive and may result in selection of materials based only on durability factors rather than on pupil material match — an illogical practice.

— *Adapting the Material:* Once a teacher has determined that a certain material meets the needs of a student who tends to be destructive, the teacher investigates the best possible means of making it durable. The most widely applied change is to laminate pages. Another adaptation involves covering pages with clear contact paper. These measures are usually beneficial. Some pupils, however, are so destructive that other measures are necessary. The optimum solution, for small amounts of material, may be to place it on pressed board and spray with acetate. This also allows destructive children to use the adapted material with less supervision than normally would be necessary.

8. What if the material/lesson moves too rapidly?

Printed and oral instruction is sometimes too rapid for certain students. Slowing down the pace, however, can produce boredom in students for whom the pace is not too rapid. Alternatives must be found and implemented.

Lesson Moves Too Rapidly

Group instruction is not always successful with special education students. One contributing factor is the failure to pace lessons so that students can benefit.

— *Modifying the Instruction:* A peer tutor is assigned to take copious notes. Later, slower students ask questions of the tutor and look at the notes. Also, lessons might be tape recorded for homework.

9. What if the lesson is too complex?

This situation is frequently encountered in group instruction and when using developmental sources with students having learning problems. When employed strictly as the teacher's manual directs, the lesson can result in failure to meet certain students' needs.

Parts of a Glossary not Understood

Learning to use a glossary or dictionary requires that a variety of skills be called into play. This learning sometimes takes place more readily when it is broken down into separate components.

— *Modifying the Instruction/Adapting the Material:* The teacher makes a base transparency presenting only the words, an overlay adding the diacritical markings, and another overlay with the definitions. This change may be long and laborious, but it might be the only good solution. The transparencies, of course, can be saved and used again and again when similar needs arise.

10. What if the presentation sequence of skills/concepts is too brief and choppy?

Materials often present skills/concepts with little practice provided, then proceed to a new skill/concept. Students with learning problems often need more instruction and practice with one skill/concept at a time.

Teaching Money Handling Too Sporadic

The text presents money handling on five pages every 60 pages. A student has difficulty learning the concepts involved.

— *Adapting the Material/Modifying the Instruction:* The teacher removes all of the pages dealing with money handling. These are placed in a folder or bound for use as a smaller text and presented as a unit. (The change need not be so dramatic. Teachers could assign and cover the pages as a unit by skipping around the book — certainly a quick and easy modification.)

11. What if significant information is not focused upon?

Discerning the most important and useful information is a necessary skill that has to be learned. Without it, students can be mired in irrelevance, unable to bring together features to make realistic conceptualizations.

Significant Written Detail Ignored

Some students have difficulty selecting the important information in reading assignments. The teacher poses

comprehension questions that the student answers incorrectly.

— *Adapting the Material:* The teacher uses a color coding system that informs the student of main ideas or significant details. For example, a red mark in the margin could indicate passages dealing with the main idea, and a blue mark could denote significant detail. Undertaking this adaptation would be long and laborious for only one teacher. Therefore, teachers should combine their efforts in marking materials and teacher's editions of texts, and trading them so they can all benefit from the effort. First, they must develop a common coding system that will work for everybody. Then it becomes an ongoing process that could be almost automatic. Assuredly, teachers will encounter students from time to time who need this adaptation, so it does not represent a one-time-only change.

Significant Transparency Detail Ignored

Some students have trouble cueing into significant items of transparencies and chalkboard presentations.

— *Adapting the Material:* The teacher stars the most important points during presentations and underlines other details while raising the voice to connote importance.

Significant Oral Detail Ignored

Students sometimes have difficulty sorting out the most important elements of a lecture or discussion.

— *Modifying the Instruction:* The teacher defines a purpose for listening; for example, "We'll be talking about the sun, with particular attention to how the sun benefits life on our earth." Cueing the student that "this is important" might be enough to elicit specific attention. Also, the teacher could pause at strategic points and say, "You'll want to remember this."

12. What if the language level is too high/different?

Written and oral instruction may be at a level some students do not grasp. The problem may be dialectical, syntactic, or semantic.

Oral Language Misunderstood

A student may not understand implications of an oral lesson. And group situations make it difficult to know whether the student is comprehending the language and conceptualizations.

— *Altering the Assignment:* The teacher devises individualized tasks for the student, using a tape recorder. The feasibility of stopping the tape recording allows the student to replay portions and to use a dictionary if necessary. This alteration is most beneficial when the lesson is no longer than 15 minutes. If required to listen to tapes for long periods, students may become inattentive.

— *Modifying the Instruction:* Students often communicate at a level best understood by peers. Knowing this, the teacher simply requests a “peer translation” when students indicate from time to time that they don’t comprehend something in a presentation.

13. What if purchased commercial products assess recall only?

Although this is a problem with materials rather than students, some students may become dependent upon recall at the expense of comprehension, decision making, and other important facets of learning.

Only Fact Questions Covered

Questions in some teachers’ manuals and at the end of reading selections in certain student texts emphasize recall of facts, ignoring the value of inference, drawing conclusions, and total comprehension. This is not a learner/material mismatch but requires attention in changing the material.

— *Adapting the Material:* The teacher supplements existing material with a variety of comprehension questions, written or typed, and duplicated. An answer key could be developed for teacher or student correction. Such changes should be planned for future use and use by other teachers. If several materials require change, other teachers or older, more capable students could take this on as a project. For example, a high school honor society might be willing to do it, or the local chapter of The Student Council for Exceptional Children might adopt it as a project.

14. What if the material/lesson is biased?

Again, this is a problem with the material, not a student mismatch. But teachers should not condone bias in the products used and should make changes when necessary.

Racial Bias

Minority races are often ignored in material, or portrayed in a discriminatory way.

— *Modifying the Instruction/Adapting the Material:* The teacher discusses discrimination and stereotypes portrayed in print, then asks the students to underline discriminatory statements. Although this does not change the material, it allows students to see it from a different vantage point.

Gender/Career Role Bias

Another form of bias in material is that of sex role stereotyping. For example, physicians and mechanics are generally male, and women are housewives, secretaries, and stewardesses.

— *Modifying the Instruction/Adapting the Assignment:* Before giving an assignment that involves reading, the teacher discusses sex and career role bias and asks the students to look for evidence of that in the reading selection. They could underline or in some other way indicate their findings.

15. What if verbal response is a problem?

A student may not be able to produce an adequate or correct verbal response.

Inadequate Verbalization

The student may know an answer, yet be unable to verbally respond in an appropriate way because of some handicap. For example, a child may know a cap from a coat but be unable to say, “This is my coat.”

— *Altering the Assignment:* If the teacher is working only on receptive vocabulary, it is possible to determine whether the student really knows an answer by changing the response mode required. For example, the student could be instructed to “point to your cap . . . coat.” Or a deaf child could sign the answer or underline the correct answer in print.

— *Altering the Assignment:* With other cases of mental or physical handicap, the teacher requires the same response mode, but at a simpler level. For example, the teacher could ask, “Is this your coat?” and require only a yes or no answer or a nod or shake of the head. This may or may not be preparatory to teaching the associated verbalizations.

16. What if the motor response is too difficult?

Similar to verbal responses, motor responses are too difficult for certain students and may lead the teacher to

believe the student does not know something. The student may actually know the correct answer but simply not be able to execute the motor requirement.

Inadequate Motor Response

An example of problems with fine motor skills is shown in illegible handwriting.

— *Adapting the Material:* The student is given a different writing implement, which might be a thinner or thicker pencil; or a rubber gripper is attached to a pencil. Another aid is a wire frame (Zaner Blaser Company) to mold the student's hand in the correct position. Or the teacher wraps tape around the place where the student should hold the pencil.

Written Spelling Words Incorrect

In spelling the student consistently writes the words incorrectly.

— *Altering the Assignment:* The teacher asks the student to respond in a different mode. For example, the student might spell the words orally. Another alteration could be to have the student circle the correctly spelled word of four presented. Or a typewriter could be used by students with fine motor or other physical problems.

CONCLUSIONS

The preceding 16 questions can be helpful to teachers in understanding some of the types of mismatch that exist and possible changes to neutralize them effectively. Focusing on a specific problem allows the teacher to more successfully adapt material, modify instruction, and alter assignments to meet individual needs. The possible solutions to the 16 questions are only representative of the potential answers. Teachers should consider them as merely examples and not bind themselves to using any or all of the solutions given.

The real value of the empirical process recommended in this article is that it liberates the teacher to use a systematic, questioning approach to brainstorm a variety of possible changes. The teacher then can concentrate on selecting a change — preferably as quick and easy as possible — that has a good chance of working to the benefit of students. If the first change is not completely effective, the teacher is free to systematically try other changes. This approach is far superior to the trial-and-error, hit-and-miss or leave-well-enough-alone philosophies that have prevailed in some classrooms for lack

of better methodology. It provides a framework and structure for change that can be instituted without undue effort on the part of the teacher — and with results that are demonstrated by student success in learning.

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CLASSROOM FORUM

by Beverly Dexter
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This year I will have a student teacher for the first time. Although the University supervisor has given me a schedule of anticipated events, I am still uncertain about exactly what to expect from the student teacher. My main concern is for the welfare of my students, and now that things are shaping up for me in my classroom, I'm a little hesitant about having a stranger come in and possibly undo everything I have worked so hard to accomplish with this group of students.

Your concern and feelings of anxiety are common among teachers — even “seasoned veterans” — who are to have student teachers in their classrooms. Some-

times the established teachers feel they may be able to learn from the student teacher. But they may fear exactly what they will learn!

Having another teacher in the classroom is not easy, especially when the other teacher might not meet the cooperating teacher's specifications for a companion teacher. Personalities may be so divergent that learning becomes negative or neutral in comparison to what could be happening. In some cases, educational philosophies may differ so much that the methodologies become incompatible with each other. Such are the nightmares, either real or imagined, of both the cooperating teacher and the student teacher.

By looking at the purpose and objectives of student teaching, the situation may be brought into perspective. The philosophy behind practice teaching is defined by the term itself: practice teaching. The student teacher has a chance to put his or her methodologies into practice in a real situation, and the cooperating teacher provides a role model. The student teacher is gradually introduced to teaching experiences over a specified period that allows time to observe the cooperating teacher, the students, and their interactions. In working with first small groups of children and later with larger groups, the student teacher practices his or her role as a teacher. This gradually building crescendo eventually leads to full responsibility for all of the students during the school day. How the student teacher perceives this responsibility may depend largely on the cooperating teacher's receptiveness to having a student teacher take over all of the classroom responsibilities.

Very few professions allow for this type of practice period in training their professionals, but such practice is without doubt the most beneficial period of the uncertified teacher's experiences. It should be a time of tremendous growth and maturation for the student teacher. All the college teachings should come together as the focal point for implementation of learned methodologies. The student teacher also should begin to reflect on these learnings and use techniques that best suit the circumstances of the student teaching situation.

The cooperating teacher should also be reflecting, but with more emphasis on the techniques he or she has been using with the students. Are these the best approaches to learning for these specific students or are they merely the concepts the teacher is more familiar with from having applied them in the past? Can the cooperating teacher learn from the student teacher? Can two teachers in the classroom really be better than one?

In most cases, both the cooperating teacher and the student teacher have anxiety regarding the many ques-

tions of their joint experience. To *not* be anxious would be unusual, and perhaps even questionable. Some of this anxiety can be relieved through communication, and an attempt to get to know and understand each other. What sort of goals can be developed as a team? As individuals? Should certain specific guidelines be followed, as in implementing IEP goals and strategies? How are these to be accomplished? When will the student teacher begin taking full responsibility for certain groups? Certain activities? The entire classroom?

These are just a few of the questions that are apt to arise. They require answers as early in the student teaching experience as possible. And it is not enough to simply set forth a list of expectations. These expectations must be discussed and analyzed. Good communication between the cooperating teacher and the student teacher is vital. Until this is accomplished, the other goals of the experience will not be met to their fullest extent.

Do you have any suggestions concerning self-evaluation for the special education teacher? I need some guidelines to help me objectively evaluate my program and my overall teaching effectiveness.

The Division for Children with Learning Disabilities (DCLD) of the Council for Exceptional Children (CEC) has developed a set of teacher competencies that DCLD hopes all teachers of learning disabled youngsters will eventually master. However noble the intentions, DCLD cannot expect many teachers to truly meet the standards of competence as set forth in these guidelines without also obtaining a doctorate or post doctorate degree in learning disabilities. What has been proposed is a detailed version of *Superteach*, a fictitious character found only in the myths of future education. Nevertheless, the fact that professionals are looking at teacher competencies and delineating them for certain groups of teachers is admirable — despite the drawbacks of the real world of education.

Teachers who wish to objectively evaluate their programs and teaching effectiveness have several alternatives open to them. One of the most popular methods of evaluation currently being used is the IEP evaluation at the end of the school year. Such re-evaluations compare earlier goals for students with current achievement levels and provide a basis for establishing new IEP goals for each child being served by the special education pro-

gram. By evaluating student progress in this way, teachers are also evaluating their programs and teaching effectiveness.

Another way to evaluate oneself in the classroom is by taping several sessions with a cassette recorder. To obtain an overall picture, several sessions should be taped. With only one session taped, the result may be unnatural. Further, the students should be told in the initial session that they are being taped so they will not discover it at some point and think they are being "spied on" or taped for detrimental purposes. The first taping may be done with the recorder in plain sight, but it should be placed unobtrusively to allow everyone to relax and act natural.

After each tape has been made, it should be labeled as to date, students present, and instructional objectives for each lesson. This way, some of the tapes may be used later for comparison purposes.

In listening to the tapes the first time, the teacher should simply keep in mind a visual image of the classroom as it was during the taping — the physical arrangement of teacher and students and any nonverbal communication, such as body language, that was taking place. Before listening to the tapes a second time, the teacher should make a list of relevant questions to be answered by listening to the tapes. Questions that might appear on the list include:

1. Who did the most talking — teacher or students?
2. Did every student become involved in the learning process equitably?
3. Were the students aware of the lesson's objectives? The teacher's objectives?
4. Were the students given enough time to think before answering the teacher's questions?
5. What types of questions did the teacher ask — narrow ones with predictable answers or broad ones requiring a higher level of thinking on the student's part?
6. Were the teaching/learning tasks broken down into small, sequential steps?
7. How did the teacher respond to incorrect responses by the students?
8. How were behavior problems (inattention, talking out of turn, etc.) handled?

After these or similar questions have been answered, the teacher should ask himself or herself one more question: If I were to do the lesson over, what would I do differently? Hindsight is usually much better than foresight, but by comparing what took place with what

should have taken place, the teacher may develop alternative strategies to be used with future lessons. It also gives a basis for selecting certain options over others and aids in devising a more cohesive set of instructional objectives.

For teachers who do not have ready access to a cassette tape recorder, a checklist of the above questions can be made and later analyzed while reflecting on a day's lessons. Memory does not always serve as well as a tape, though, because humans tend to block out negative or aversive memories or to play them up when a significant time lapse occurs between the actual event and the reflection of the event. Also, there is the disadvantage of not always having sufficient time to recall the lesson shortly thereafter. With a tape recorder, instant recall is at the teacher's fingertips. And if there is an interruption during the listening, the tape or any portion may be replayed.

A third method for evaluating a program or teacher effectiveness is to take time at the end of each school day to mentally review the day's happenings. Unless this is done in a structured manner, however, it may lack validity and reliability. Some questions that might be asked during this reflection period might also be asked on a weekly basis to follow up certain activities that have longer range effects.

The following questions are suggested as guidelines for teachers to consider on a regular basis to further evaluate their individual programs and roles as facilitators of those programs:

1. Do I identify, measure, and record pupil behavior before *and* after teaching?
2. Do I monitor initial skill practice with immediate feedback?
3. Do I identify and implement activities for correcting incorrect responses and/or behaviors?
4. Do I adapt my teaching materials and methods to meet the learning styles of individual students?
5. Do I confer with each student on a regular basis regarding progress or needs for improvement?
6. Do I incorporate the teaching of reading into a total language arts program in which speaking, spelling, listening, and writing skills are taught?
7. Do I help students learn how to seek alternative methods for obtaining information? Are they encouraged to seek help from each other, from other teachers, during study sessions together, from reference books in the library, and in other ways?

8. Do I work toward developing independent study skills among my students? How often do I encourage self-monitored assignments, simple time management skills, memory aids like calculators?
9. Do I deemphasize competition?
10. Do the children know what I expect of them in my classroom? Do they know what they are expected to learn, how they are to learn it, and how they are to demonstrate this learning?

These questions are merely guidelines and suggestions for helping teachers evaluate themselves and their programs. Some questions may be deleted if they do not apply to a specific teaching situation. Others may be substituted or added to the list. In any case, these questions should serve as reminders of what is involved when evaluating children's learning. Most important, in evaluating the learning of children, teachers must also evaluate themselves.

Can you suggest some interesting ways to help students develop language skills? My classes seem to need something "extra" along that line.

Many special education teachers, like you, have searched for new and creative ways to get students more involved with language development. Teachers have realized that students often have difficulty in being spontaneous even though they have some good ideas to express. In recent years the Language Experience Approach (LEA) has become popular. The teacher's role then becomes one of *facilitator* for encouraging the expression of ideas, experiences, creative stories, and so forth.

With this approach a complete, written story, for example, may not be the desired end result. For younger children, nonreaders, or beginning readers, a modified rebus activity might be more appropriate initially, possibly using a flannel board with a variety of related pictures for students to manipulate. A student may either tell the story to the teacher (or another student) while placing the pictures on the flannel board, or may tell the story after putting up the pictures in sequential order. Another idea is to have students "read" a story into a tape recorder for later replay for their parents. Or students may want to make drawings of their flannel board stories to take home — with or without a tape recording.

Using pictures from magazines or posters is a good way to encourage students to anticipate actions or outcomes. A picture of someone getting ready to place food in the oven might be a beginning step toward learning to anticipate. The teacher could introduce this concept by merely asking the student to tell about the picture and what he or she thinks will happen next. To expand the child's thinking further, the teacher might ask questions about activities that occurred before getting ready to put the food in the oven — and what happened after the people ate the food. Sequencing and logical thought are brought into play through this activity.

Riddles may be used to encourage students to use judgment and interpret main ideas. Simple riddles can first require the child only to listen rather than read the riddle then relate the question to a recent experience; i.e., "I am blue. You wore me yesterday to keep off the rain. What am I?" The response could be in the form of a drawing, selecting the correct picture or word from among a group of items, verbally giving the answer, or writing the answer on paper. If a tape recorder is available, students might like to make up and record some riddles of their own for the teacher to put into writing, or to be shared with other students. This activity may be done individually or in small groups, preferably in a learning center set up for tape recording. Another variation is to have students dictate riddles into the recorder for other students to copy and then answer, but this becomes too tedious for most students. To have the other students listen to the tape and write down the answers is usually better.

Making a bulletin board with the students is another activity that can be as diverse and creative as the teacher allows. A seasonal bulletin board, for instance, can be used to strengthen students' sensory imagery. Such a board could be arranged according to what students see, feel, smell, hear, and taste applicable to a certain season or holiday. Pictures or complete sentences on tagboard may be used. The students should be encouraged to share these sensory experiences and maybe asked to write about the impressions that are uppermost or "best." These activities then can easily be incorporated into booklets like, "I Know Winter is Here Because . . ." Each child might contribute a sentence to the booklet, or the children may be asked to complete their own individual booklets and share the contents later with the entire class.

In another activity simple dictionaries are developed by children who are learning the letters of the alphabet. A variation is to have the students make their own booklets of special words that they use frequently or will

need to know in the future. It will help if these words are alphabetized as well as classified into specific categories. Words for animals, people, colors, shapes, and numbers might be the groupings for young children. Older or mentally handicapped students should concentrate on areas including words on application forms, in the grocery store, in a restaurant, and in a (simple) cookbook. The sections of the booklet may be divided by a colored tab for easier identification, and each word should be written in a complete sentence developed by the student. If helpful, a picture or drawing may be used to associate the word's meaning. These "dictionaries" may be used for spelling, reading, and writing activities. The student may be asked to write new sentences for a word or group of words, or several sentences, a simple story, or other written activity using words from a specific category in the booklet.

Cartoons, either single blocks or in a series, are also good motivators for language experiences that can be translated easily into reading experiences. Either cut out the "bubbles" of people speaking or cover them up, then ask students to make up what they think might be said

by using the visual clues of the cartoon. Older students particularly seem to like this activity, along with an expanded version in which they write a short story about the cartoon. A variation of this is to show only the first three panels of a four-panel cartoon and ask students to write the "punch line" for this series. Or the students may want to actually draw the final panel along with what the people or animals are saying.

Puppets and short plays are other excellent sources for language enrichment. Children who are normally shy frequently open up through the media of puppets or costumes. Brief written scenarios may be the beginning steps toward developing short plays. Variations are numerous, and the extent to which teachers wish to expand on this concept is up to them.

These are only a few of the possible ideas for encouraging students to develop and expand their language skills. Selection of any of these activities should be based on how well it relates to the student's level of independence, language skills, and the underlying learner objective for the individual students.

ALERT

UPCOMING PROFESSIONAL MEETINGS

October 15-18, 1980

Canadian Council for Exceptional Children
Halifax, New Brunswick

October 30-November 1, 1980

Association for the Severely Handicapped
Los Angeles, California

October 31-November 1, 1980

Division for Children with Learning Disabilities
Denver, Colorado

February 15-17, 1981

CEC Conference on the Exceptional Black Child
New Orleans, Louisiana

February 18-20, 1981

CEC Conference on the Exceptional Bilingual Child
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