

Improving
Reading/Spelling Skills
via
Keyboarding

A Teacher's Manual
to accompany the student text:
Individualized Keyboarding
for Personal Typing and
Computing

by

Don McCabe

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A Teacher's Manual to accompany the student text: Individualized Keyboarding for Personal Typing and Computing.

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The student's book for this course is entitled: *Individualized Keyboarding for Personal Typing and Computing*. The reason is simple. Most students want to be able to use a typewriter or computer keyboard. At the same time, most students who may happen to have a reading or spelling problem do not want to admit it. Fear of being looked down upon as being a "remedial" student may prevent them from taking a keyboarding course if their book were to be entitled, *Improving Reading/Spelling Skills via Keyboarding*.

Organization of the Manual

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Part I Basis for theory that students can learn to improve their reading and/or spelling skills by learning phonic patterns as they learn the keyboard

Modern English spelling is fundamentally a system of a comparatively few arbitrary contrastive sets of spelling-patterns, to which readers, to be efficient, must through much practice, develop high-speed recognition responses.

— C. C. Fries, *Linguistics and Reading*

One of the time-honored methods of teaching a person to respond to what Fries describes as “arbitrary contrastive sets of spelling-patterns” is that of having the person look at the word, say the word, try to see it in his mind, and then to write the word several times. The act of writing the word – if it isn’t a mere drawing exercise – does help lock the pattern of letters into the computer brain.

This is why many teachers for years have combined the teaching of writing with reading and why Maria Montessori advocated teaching reading through writing. If a person hears the word all, is shown the word all, writes the word all using the letters a-l-l and says, “AY EL EL, all” as the person writes it over and over and over again, the learner is not only practicing stroking techniques in penmanship, but the learner is also locking in the sounds of the letters with the words.

Imagine a person writing the following exercise longhand while hearing someone read the word, as he/she sees and writes the words.

all	ball	balls			
all	call	calls	called	calling	caller
all	recall	recalls	recalled	recalling	
all	fall	falls		falling	
all	halls	halls			
all	mall	malls			
all	small				smaller
all	tall				taller
all	stall	stalls	stalled	stalling	
all	install	installs	installed	installing	installer

By the time the person is finished, he/she can read and respond to all the words.

For convenience, we will repeat Fries' definition of reading (with our italics) and then we will paraphrase it.

Modern English spelling is fundamentally a system of a comparatively few arbitrary contrastive *sets* of *spelling-patterns*, to which *readers*, to be efficient, must through *much practice*, develop *high-speed recognition responses*.

— C. C. Fries, *Linguistics and Reading*

Modern English spelling is fundamentally a system of a comparatively few arbitrary contrastive sets of spelling-patterns, to which *typists or computer operators*, to be efficient, must through much practice, develop high-speed *digital (or kinesthetic)* responses.

— C. C. Fries, *Linguistics and Reading*

Copying words, if done "actively," is a help to learning to read. This is often considered to be a kinesthetic mode of learning. Remember, however, that drawing words (copying passively with no concentration) does not help.

Typing is kinesthetic. The automatic muscle responses to letters and letter patterns help in almost precisely the same way as the automatic muscle responses in the fingers (or throat muscles when vocalizing or subvocalizing) help a person remember a word after the person has finished writing it.

Typing can provide the drill	drill	drill	drill	drill
	ill	ill	ill	ill
	rill	rill	rill	rill
	drill	drill	drill	drill

or as Fries describes it, "much practice" that is necessary for some students to learn to read or spell or type or as he puts it, "develop high-speed recognition responses."

Others would say that since typing uses both hands, both sides of the computer brain are automatically involved. Integration of both right and left hemispheres of the brain is considered desirable by most experts on reading,

Part II Using Keyboarding as a method to tutor AT HOME a student with severe learning disabilities

Before each lesson volunteer tutors (such as parents) should read the instructions aloud to the student. We prefer that tutors use the “neurological impress” method with their students — that is, with plain index card or finger the tutors point out the words as they read them. This way the students who are reading along (or attempting to read along with their tutors) can hear the words correctly pronounced and have his mistakes in reading corrected immediately without any special attention being given to them.

We highly recommend that the time allotted to keyboarding be from ten to fifteen minutes three to six times a day. Please treat this just as you would a doctor’s prescription. If the prescription reads take one red pill three times a day, it means just that. It doesn’t mean take all three at one time. So too, to be the most effective, this keyboarding program should be done at regularly scheduled intervals. For example:

One Possible Daily Schedule for School Days

- 6:30-7:00 Wake up, shower, dress.
- 7:00-7:15 Keyboarding with volunteer tutor (parent).
- 7:15-7:30 Breakfast
- 7:30-8:00 Travel time
- 8:00-3:00 School
- 3:00-3:30 Travel time
- 3:30-5:00 Home Work (Free time when finished)
- 5:00-5:15 Keyboarding with volunteer tutor (parent).
- 5:15-7:00 Supper, dishes, free time.
- 7:00-7:15 Keyboarding with volunteer tutor (parent).
- 7:15-9:30 Free time (when chores or homework don’t interfere).

One Possible Daily Schedule for Weekends & Holidays

- 15 minutes keyboarding before and/or after breakfast.
- 15 minutes keyboarding before and/or after lunch.
- 15 minutes keyboarding before and/or after supper.

Tutoring Techniques

Smiles and Good Humor Essential

The person being tutored must be constantly cheered up and made to fully appreciate the fact that everybody makes mistakes. Mistakes are natural. Mistakes are opportunities to learn. Both students and tutors should never be ashamed to make a mistake. Mistakes are the natural way of learning. No one ever learned to walk without falling down. No one ever learned to use a knife and fork without first missing his mouth. No one ever learned to drink from a glass without spilling milk thousands of times. Think about it! Watch how a baby learns. Babies learn to stand and walk and speak a language without a class and without a textbook but not without making mistakes.

These concepts are presented time after time in the directions. So, please

Never skip the directions!

Never skip the directions!

The directions are as much for the tutor as for the person being tutored. The directions are often as important for the learning process as the lesson. Sometimes even more so.

Use a plain index card and a paper clip to make it easier for the student's eyes to keep the place.

Each line in the beginning lessons will be typed three times.

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Each line in the beginning lessons will be typed three times.

You will read the line AS your student types. You will read the words. The student will have to think the letters. You will read the words. Your student's mind will link the letters he is typing to the word his eye is seeing and the word his ear is hearing. The third time that the line is typed, the student reads the words. You only correct or tell him what the word really is if he misses.

Never, never, never say: "Didn't I just tell you what the word was?"

Although it may be natural to be generous with criticism and stingy with praise, you must learn to be generous with praise and skip the criticism.

Read all the directions to all the exercises before starting exercise 1. This will give you an overview. In fact, why don't you just put this book down right now (but mark your place) and read the directions to all the exercises.

This is where you left off! You did pick up the student's book *Individualized Keyboarding for Personal Typing and Computing* and read the directions to all the exercises, didn't you?

Now that you have read the directions to all the exercises in Individualized Keyboarding, you are ready for the AVKO Nine Commandments.

1. Thou shalt not let your student get uptight over mistakes.
2. Thou shalt not let your student watch his fingers. He must learn to feel the positions of the keys, to lock the positions of the letters and the letter-patterns into his muscle memory.
3. Thou shalt make sure your student sits up straight when he types. This has nothing to do with posture. Tell him so. The fact is: leaning back is more comfortable — but, unfortunately, that position signals the computer brain that it's time to relax, turn-off, get ready for sleep. That's why I often doze off reading a book in my favorite recliner. Sitting up straight is the body's natural position for attention, for learning. Teachers have been right for years about having students sit up straight, but they have been right for all the wrong reasons.
4. Thou shalt not let your student backspace and erase. Mistakes are for learning — not for correcting on paper. (Later on, if you are working with a computer, the backspace for erasing is certainly permissible. But for learning purposes, we want to move forward as quickly as possible without correcting mistakes.)
5. Thou shalt remember to encourage your student. Every single time he types a line correctly, praise him. PRAISE HIM. At the very least, say "Good."
6. Thou shalt not let your student hit the right key with the wrong finger. WATCH HIS FINGERS! The only exception is the letter c. Try to help him learn to use the d finger for the c. If he can't because his finger muscles are such that striking the c with the d finger is practically impossible, you may allow him to use the f finger.
7. Thou shalt not let your student type a word that he cannot read. Encourage your student to ask you what a word means. Most students today (even some adults) who need this type of tutoring will not know what a lad or a lass is and the word lad is in the very first exercise. Tell him what a lad is. Help him learn the meanings of words. Quiz him. If he knows the word, praise him. If he forgets, a gentle reminder is what he needs — not criticism. Never let him feel dumb just because he forgets. We all forget. And don't you forget it!
8. Thou shalt read punctuation marks and spaces. For example, you should read AVKO's 8th commandment as:
 Thou shalt read punctuation marks and spaces period space space.
9. If you can't be with your student in person, you can always be there by proxy. Use a tape recorder to record the directions and the exercises.

Part III Using *Individualized Keyboarding for Personal Typing and Computing* as a text for an adult program for functional illiterates.

Individualized Keyboarding for Personal Typing and Computing is especially designed to help adults with literacy problems to unlock the written code of language. Please note that this course is not particularly designed to teach all the other reading skills such as using context clues, developing greater eye-span, retention, comprehension, etc., but it is designed to help adults whether they are nine or ninety to decode and encode the English language. It is also especially designed to enable individuals with learning disabilities to unlock the written code of language.

The typewriter or computer is essentially a gimmick, but a very important gimmick. We cannot imagine a situation where we could get a grown man or woman to form the letters of the following lesson with a pencil while listening to someone read:

aaa lll aaa lll all all all all all all

aaa lll aaa lll all all all all all all

aaa lll aaa lll all all all all all all

If we could get a person to copy each letter and each word as he heard it, we know that by the end of the exercise the person would be able to read and spell the word **all**.

With the exception of the person who is learning to print or to write letters, this method is much too slow and much too painful to teach all the beginning words a person needs to learn. What is needed is something that will give the drill drill drill drill drill that is necessary without the pain. This is where the typewriter or computer keyboard comes in. Both the typewriter and the computer have a fascination that holds and focuses the student's attention. The learning how to use the keyboard is also a practical skill that most youngsters and adults would like to acquire and thereby gives added motivation for added learning concentration. The important kinesthetic sense (the K in AVKO) is employed by striking the correct key with the correct finger in the same basic way that it is in writing or copying longhand.

Typewriter recommendation: Electric. Generally speaking, manual typewriters should not be used with this course. People with reading problems quite frequently lack the digital dexterity to strike the keys quickly and smoothly without causing keys to jam or the spacing mechanism to skip. Students with reading problems rarely, if ever write. Students who rarely, if ever, write just don't develop the same amount of finger control and dexterity as the students who read, write, play musical instruments, etc. Functional illiterates lack the physical skills to properly strike the keys. Keys will jam on them. The machine will skip spaces because the space bar mechanism is pushed down with too much force and not struck rapidly and released rapidly. AVKO does not know of any really

successful project with manual typewriters. Electric typewriters and computers, yes. Manual, no.

Of all the electrics, the best is the type that has an element (that little round ball) rather than keys. The best known is the IBM Selectric®. The most important reason for using this type is that it has no key bars to clash. Also there isn't that absolute need to strike the keys in a perfect fashion as there is with manual typewriters. The element that moves from left to right also has the good effect of imitating the natural eye-movements of reading. The same is true of computers. Typewriters that use key bars have carriages that move from right to left.

More important than the typewriter or computer is the volunteer tutor. If at all possible, at the registration for this course, it should be impressed upon your students that they should bring their own volunteer tutor. Of course, that is unnecessary if your school district has enough funds to pay high school students to act as tutors or if you can get funds from local or federal agencies, or if there happens to be an active volunteer agency nearby.

If this course is part of the junior high or senior high remedial program, again it would be best if each student could have a volunteer tutor. This can be arranged by having upperclassmen receive academic credit for tutoring. This way, a remedial reading class could have a total enrollment of thirty-six students as far as class size is concerned, but in reality it would only have twenty-four remedial students with twelve student tutors. The reason for the one-to-two ratio is because a one-to-one ratio would end up having many tutors sitting around with no student because as a general rule, remedial students have a much higher absenteeism rate than regular students.

Adults attending adult high school class could be made responsible for bringing someone outside the immediate family such as a neighbor or possibly a nephew, niece, uncle, or aunt. Again, it would be possible for reliable high school students to be given extra academic credit for being tutors.

The volunteer tutors are responsible for reading and following the instructions for each lesson. They must be instructed to check with the teacher if there is the slightest chance that they might not fully understand any direction in the book.

The teacher must find some time to talk to each of the volunteer tutors making sure that they fully understand the necessity for always giving encouragement and for never, never, never making their students feel dumb. In fact, it must be impressed upon them that there is no such thing as a dumb person—only people who have been carefully taught that they are dumb and who act accordingly.

The teacher should demonstrate to the volunteer tutors how they should call out each word and spell each word as the student types the line. The first two times through each line, the volunteer tutors call out the words and letters. The third time through the line, the student himself calls out the words and letters.

Having the student himself call out the words and letters on the third time through a line ensures that the student is active in the learning process and not merely passive.

He hears the words and letters combining

A Audio

He sees the words and letters combining	V	Visual
He feels the words and letters in his finger movements	K	Kinesthetic
He says the words and letters	O	Oral

This is the AVKO technique: **A**udio, **V**isual, **K**inesthetic, **O**ral.

The presence of volunteer tutors in an adult program (or a junior or senior high remedial reading program) will free the teacher to move about the room giving personal attention and encouragement to each of the students individually. It will also enable the teacher to break up the classroom routine with different types of drills using either the overhead projector or the chalkboard.

These drills should be the kind in which the students and their volunteer tutors correct their response immediately—the same principal that underlies the effectiveness of teaching machines. One of the many types of drills that can be initiated at the beginning of the hour is the AVKO Sequential Spelling. These tests develop the student's self-confidence. They quickly learn to spell words without ever having studied them (or many times, without ever having seen them). For example, the students will learn to spell the word installment on the installment plan.

You say:	all	They write	You show all	They correct
	tall	“ “	tall	“ “
	stall	“ “	stall	“ “
	install	“ “	install	“ “
	installment	“ “	installment	“ “

Excitement! They know that they are going to spell the word install correctly, and they do. For the moment they are 100% positive that they can correctly spell install—but only for the moment. You know and I know that they are liable to forget. Forgetting is a normal natural mechanism of the human computer brain. Every human being is programmed to forget. Let 's assume that you are reading this in a classroom. Before you entered this room you passed by literally thousands of different things from trees to license plates to cars to stones to you-name-it that came within your field of vision. Since most of these were not important enough to be used, they have already been forgotten as far as the active recall of the memory is concerned.

Ninety-nine per cent of all sense data processed by the human computer brain is forgotten in seconds—data such as sights, sounds, smells, temperature variations, etc. Of the 1% retained 99% of that is forgotten within hours. Of the remaining .01% 99% is forgotten within weeks. Forgetting is a natural mechanism. To keep data in the active memory requires usage—old fashioned, repetitive drill. If you don't use it, you lose it. So the next day, you give the students the chance to recall and the chance to miss and to learn from their mistakes.

You give	call	They write	You show call	They correct
“ “	recall	“ “	“ “ recall	“ “

“ “ stalls “ “ “ “ stalls “ “

If the students have severe learning disabilities, about half will leave out the t in stalls. But you show it. They correct it. And they will learn.

“ “ installs “ “ “ “ installs “ “

Excitement time again. The students know that they will have this great big word right two days in a row. Among the other words given the next session are: calls, recalls, stalled and installed. The fourth session will include among the standard 20 sequenced words: called, recalled, stalling, and installing. The next session will even have installment and the one after that will have installments.

AVKO's Sequential Spelling is a five to ten minute daily drill that not only has repetition of phonic sounds, it concentrates on endings which most students with reading problems ignore. Therefore, rather than just give base words and rules as is traditionally given to students, AVKO always gives the -s, -ed, and the-ing forms of each word. AVKO Sequential Spelling differs from traditional spelling in that it:

- concentrates on endings
- uses repetition with success
- requires no studying by the student and no correcting by the teacher
- uses repetition to encourage learning from mistakes.

Grading Procedures

Grading procedures should not be linked with how fast or how well a student learns to type. Rather, in an individualized keyboarding class each student should be graded (if grades are given at all) on the student's attendance, attitude, and effort. It should be stressed at the beginning of the course that it really doesn't matter when one learns how to type or read. What matters is that one eventually gets there. We suggest that you use the following analogy on your students and their volunteer tutors.

- Can you tell by looking at someone who is thirty years old just when that person first began to walk or talk?
- Is it important to know when the person first walked or talked?
- What difference is it to anyone today whether the person who is thirty years old first walked at nine months old or three years old? Who cares?
- Who cares when a person learned to feed himself without stabbing himself in the nose with a fork?
- **It's the getting there that counts—not when!**

Teaching the class without the support of volunteer tutors

AVKO recognizes that there is a vast gap between theory and practice. In theory, having volunteer tutors is absolutely the only way to go. However, in practice, getting volunteer tutors isn't easy. In some places, it's downright impossible. Therefore, the teacher must adapt.

- Read the directions with (not just to) your students. It is true in an individualized class, you can't keep them together, but at least for the very first session, they are together.
- Even though in the first lesson the students are told not to worry about making mistakes, you must repeat, repeat, and repeat that "Mistakes are Opportunities to Learn." We suggest that you have a student from the art department make a great big sign that you can hang on your wall saying:

Mistakes are Opportunities to Learn.

- Underlining. When you don't have volunteer tutors to help a student read a word, you have to have a method to handle the situation. We suggest that you have your students underline the words that they don't know. This way, as you walk around the room chatting with your students and giving encouragement to them, you can help teach each student the specific words they don't know. Or when you collect their papers, you can transfer the underlined words to each student's chart of words they must learn. From this chart you can determine the best method for a particular student to learn the words. We happen to believe that those words that follow regular phonic patterns are best taught in groups and as AVKO's *The Patterns of English Spelling* is the only source, we recommend that you have at least one copy for reference and assignment. Those words that do not follow patterns (words such as solder, soldier, lingerie, wasn't, colonel, etc.) require a tremendous amount of repetition for mastery learning to take place. We recommend that you concentrate on only a few and check the student every day on his two or three words, or as frequently as you can. After they have correctly read and spelled those words on six consecutive occasions—they probably know them and then you can add another two or three irregulars. A good spot to keep this record is on the back cover of the student record book.

Directions to be read WITH—not just to—your students

Level One—Lesson One

Introduces: a d l

Basic letter patterns taught: -all -ad la- da-

Directions:

1. Always follow your teacher's (*Point to yourself, and say: That's me!*) directions.
2. If you don't have a teacher and you are using a typewriter,
 - a. Place this book to the right of your typewriter on a bookholder. If you don't have a bookholder, place something underneath it so that it is in a good reading position.
 - b. Insert paper. If you don't know how, don't be afraid to ask someone how it's done properly.
 - c. Locate the home keys and place your hands very, very lightly on the proper keys, as per illustration.

LEFT hand	RIGHT hand
a—little finger	;—little finger
s—ring finger	l—ring finger
d—middle finger	k—middle finger
f—index finger	j—index finger

Make a quick check around the room to make sure that everybody can put their hands on the home keys. You might want to spend a few minutes practicing the taking of the hands off and putting them back onto the home keys.

3. If you are right-handed keep your right thumb above the space bar and space automatically after every word or letter grouping. If you are left-handed keep your left thumb above the space bar and space with your left thumb.
4. Say each word—not just letters—to yourself as you type it.
5. Each line is to be typed three times before going to the next line.

aaa lll aaa lll all all all all all
 aaa lll aaa lll all all all all all
 aaa lll aaa lll all all all all all

6. Don't worry about mistakes. Mistakes are opportunities to learn. If you don't know how to pronounce a word or if you don't know what it means, underline it on your paper (not the book) with your pencil. Learning is what counts in this class. Let your teacher ("That's me!") help you. If you don't have a regular teacher—the underlining is a signal to your computer brain that it has something to solve. And it will, if you will let it.

Level One**Lesson One****Exercise A**

1. aaa lll aaa lll aaa lll all all all all
2. ddd aaa ddd dad dad dad dad
3. aaa lll ddd lad lad dad dad add

The student's copy should look like this:

1. aaa lll aaa lll aaa lll all all all all
1. aaa lll aaa lll aaa lll all all all all
1. aaa lll aaa lll aaa lll all all all all

2. ddd aaa ddd dad dad dad dad
2. ddd aaa ddd dad dad dad dad
2. ddd aaa ddd dad dad dad dad

3. aaa lll ddd lad lad dad dad add
3. aaa lll ddd lad lad dad dad add
3. aaa lll ddd lad lad dad dad add

7. Point out that lad is a word meaning a young man and that its female equivalent is lass. These two words, lad and lass, go together as pairs. We say, “lads and lasses” or “laddies and lassies,” but we shouldn’t ever say, “boys and lasses” or “lads and girls.” Other pairs that can’t be mixed are: ladies and gentlemen, men and women, guys and gals, boys and girls. No one would even think of saying women and gentlemen, ladies and guys, boys and gals, etc.

8. Impress upon your students the one AVKO NEVER RULE: NEVER, NEVER, NEVER deliberately hit the right key with the wrong finger. Do not deliberately send improper signals to your computer brain.

9. The most common mistake in the first lesson will be doing the exercise three times rather than doing each line three times. For example:

Exercise A—the RIGHT way

aaa lll aaa lll aaa lll all all all all
 aaa lll aaa lll aaa lll all all all all
 aaa lll aaa lll aaa lll all all all all

ddd aaa ddd dad dad dad dad
 ddd aaa ddd dad dad dad dad
 ddd aaa ddd dad dad dad dad

aaa lll ddd lad lad dad dad add
 aaa lll ddd lad lad dad dad add
 aaa lll ddd lad lad dad dad add

Exercise A—the WRONG way

aaa lll aaa lll aaa lll all all all all
 ddd aaa ddd dad dad dad dad
 aaa lll ddd lad lad dad dad add

aaa lll aaa lll aaa lll all all all all
 ddd aaa ddd dad dad dad dad
 aaa lll ddd lad lad dad dad add

aaa lll aaa lll aaa lll all all all all
 ddd aaa ddd dad dad dad dad
 aaa lll ddd lad lad dad dad add

Expect mistakes. And please be emphatic! Not only tell your students once that you expect them to make mistakes, but tell them again and again. Mistakes are a natural part of the learning process. They are not to get uptight over mistakes. No one has ever learned to walk without making mistakes and falling down. No one has ever learned to talk without making mistakes. No one has ever learned how to eat without spilling food all over the floor. No one has ever learned to ride a bike without falling down. We learn by and through mistakes.

Unfortunately the grading systems employed by most schools have the tendency to make students afraid of making mistakes. In fact, some students would rather get a zero for not doing an assignment than to try and then as a result get back a paper with a D or E on it written in bloody red ink with all kinds of checks, circles, and nasty comments.

Remind your students that they are never to watch their fingers. However, please don't preface your reminders with a scolding such as "Didn't I just tell you yesterday not to watch your fingers." The reason why students should not be allowed to watch their fingers is because the computer brain is more apt to rely on the visual location of keys rather than the kinesthetic (muscle memory) mode of learning. We should try to reserve the visual mode for the words on the paper that we are copying from or to.

Individualizing the Instruction

Each student goes at his own pace. When a student is finished with a lesson (or thinks he is finished), he should check with you before going on to the next.

Do not mark his paper. Don't check for all his errors. One glance should be sufficient to tell whether or not the student has learned what was taught in the lesson. To have learned does not necessarily mean having the paper error free.

Mistakes are Opportunities to Learn

A paper that is filled with mistakes in the top half but is relatively error free near the bottom should mean that the student has learned, and it is the learning that is important.

If a student thinks he knows the material even though the paper is a mess, we suggest that you ask him to re-do the last two lines of the last exercise one more time while you watch. If he types those two lines satisfactorily, let him go on. But be careful and do not let him progress so fast that he becomes lost.

Some students have been so badly programmed that they equate numbers of lessons completed with learning. Thus they think that the faster they finish the better. So you must keep reminding those particular students that learning is what counts in this class—not how fast you finish a lesson nor how many lessons you finish.

If a student wants to go back (and some will), let them. Some will want to develop more speed and accuracy by working on easily memorized passages. But help them to move forward. Don't let them dwell too long on any one page.

All exercises in every lesson need not be completed. You as the teacher should use your discretion. This course is designed so that a normally slow student can actually move through the course and learn the keyboard without doing all the exercises.

This course is not designed to fit the mythical average student. It is designed so that the very slowest student can learn to handle a typewriter or computer keyboard and to read what he is typing provided he has someone helping him. We fully expect the bright students to whiz through the keyboard lessons. Many of the average and even below-average students may also speed through without having to do each and every exercise. You, the teacher, should be the judge as to how well a particular student has learned the position of the keys and the words and the spelling patterns presented in a lesson.

Once a student has completed Level Three, Lesson 10, the keyboard has been mastered. At this point, most traditional typing classes will emphasize business typing. This is exactly what is needed for the traditional business student taking a traditional business oriented typing course. However, AVKO believes that students with learning problems need more time practicing the keyboard. It is this additional practice on the keyboard that can be used more profitably for them by learning such things as spelling, grammar, vocabulary, composition, and reading comprehension skills, etc.

We strongly recommend using SRA's *Reading for Understanding* by Thelma Gwinn Thurston. These closely graded comprehension builders allow a student to read and type at his/her reading level. Because the student must think while he is reading in order to make the correct decision at the end of the first or second sentence, it helps develop a habit of thinking while reading rather than just hearing a voice inside of their skull calling out words.

But any type of straight copy could be used provided you ensure that your students don't just copy letters. You can do this by having your students underline in pencil all words that they are not 100% sure of, whether the meaning of the word or how to pronounce it. You should have your tutor (or yourself) occasionally go over the words on the page with a student. Try to get your students to overcome their fear of asking questions, especially questions such as: "What's this word?" or "What's this word mean?" This is a real fear. In fact, most teachers themselves have this fear. We at AVKO believe that the natural "question box" stage of childhood is stifled somewhere in schools by either classmates laughing at the question or by a teacher unintentionally making the child appear stupid by the way she answers his question. By adulthood, almost everybody has acquired this fear of asking questions whether from being ridiculed themselves or by watching others being ridiculed. ***Please encourage questions.*** If you are lucky enough to have volunteer tutors make sure that they encourage questions and that they never ridicule their student for asking any question.

To help develop your ability to help students learn words without always having to ask questions, we insist that each student underline in pencil every word a student may not be sure of. This way, when the students hand in their work, you will know something about each student's individual problems and that in turn can help you help each student figure out the pronunciation or meaning of any word that you think is vitally important to be learned. This implies, of course, that you are NOT to try to teach a whole lot of words and definitely not all that are underlined. You may be surprised at how much your students can learn on their own after being given an assist by you. It is probably best that

you explain to your students that there is a sound psychological reason for having them underline the words whose meanings or pronunciations they are not 100% sure of. The underlining is in effect a signal to the computer brain that this word is a word that the computer brain should figure out. If during the process of a single lesson, the same word is underlined two or three times, quite often the computer brain solves the problem because the underlining directs it (the subconscious) to work on solving the mystery word. If underlining the same word several times isn't enough to help the subconscious solve the mystery word, the student still might become so anxious to learn the word that he will just have to say, "Hey, Mrs. T.! What's this word?" And chances are he will remember the meaning because he wants to remember the meaning.

Using relevant interesting straight copy

Using relevant interesting straight copy can be a real part of any keyboarding course. For example, you can have your students type the anecdotes from old copies of *The Reader's Digest* and make their own personal joke book. Yes, joke books are relevant! In fact, we at AVKO believe that humor is a key technique to get students to think *while* they are reading. Isn't that what comprehension is all about? Think about it. Jokes are not funny if the mind isn't operating at more than one level simultaneously. To comprehend what is being read requires this facility of operating at more than one level. Practice in thinking comes much more easily with humor than with drier than dust paragraphs followed by endless question and answer exercises.

More traditional ways of teaching reading comprehension through typing can be employed by having students type exercises from reading manuals, workbooks and exercise cards. Almost every school has either unused or not-used sets of SRA Reading Labs. They can be used. Again, we at AVKO prefer using SRA's *Reading for Understanding* with a slight variation. We don't score the exercises. The student is to use the answer booklet only when he isn't positive that he has the correct answer. Then, if he still isn't sure why the answer given is correct, he is to ask the teacher to teach him why. We at AVKO firmly believe that mistakes should be opportunities to learn and not the means for grading.

Using *Individualized Keyboarding for Personal Typing and Computing* as a text for MAINSTREAMING students with learning problems

Public Law 94-142 has focused attention on the need to provide equal services for all—including the learning disabled. This means that more and more special education students will want to learn how to type or operate computer keyboards. They will also want to be able to learn to type in a regular typing classroom. With a traditional typing text, they are doomed to failure. See p. 24 for an experiment to test and explain this concept.

With Individualized Keyboarding as the standard introductory base to learning the keyboard, all students from the brightest to the slowest can function within the same room. The teacher can start all her students off together on Level One, Lesson One. The abilities of the students will determine how fast they proceed through the book. But speed of learning and speed of progressing and the speed of typing should not be used for grading purposes.

Grades can and should be based on: *Attendance, attitude, and behavior.*

If, however, the teacher prefers the traditional text and the traditional approach for most of her regular students—fine! All she has to do is to use AVKO's *Individually Guided Keyboarding* with those students who cannot handle the traditional materials. Now, her grading problems have been reduced. Those who cannot handle traditional typing and who make excessive errors that create headaches in correcting can be taken off the regular textbook and put on the AVKO program.

Instead of having 35 students with 35 grades given per day, the typing teacher would probably have only 20 students with daily grades and 15 more whose grades are given strictly on attendance, attitude, and behavior.

If you jumped immediately to this section on **mainstreaming**, go back and read Parts I, II, and III even though some of it will not apply to you. Then re-read this section and it will make more sense to you the second time around. We have deliberately said very little about how to handle specific **mainstreaming** problems and problem students. Each school and each classroom will have its own particular sets of problems. We fully believe that if the special education teachers, counselors, and consultants sit down and discuss with the typing teachers their mutual problems, **mainstreaming** can work.

Part V: How AVKO's approach differs

Traditional Keyboarding

- Designed for average students.
- Above average students succeed quickly.
- Average students success with effort.
- Below-average students struggle. Only with great effort will they sometimes pass, but usually the slow, the learning disabled, and the dyslexic will fail.
- Teaches single letter-finger-key

AVKO's Keyboarding

- Designed for "slow" students.
- Above average students zoom through.
- Average students succeed quickly.
- Below average students meet with success. The slow, the learning disabled, and the dyslexic achieve measurable success.
- Teaches spelling patterns.

Sample traditional exercise
used to teach the letter h

hat thin hug eight march show
ship happy throw mouth huge
height ghost spaghetti hawk

Analysis:	Letter	No. Used
	h	15
	a	5
	c	1
	e	4
	g	4
	l	5
	k	1
	m	2
	n	1
	p	3
	r	2
	s	4
	t	9
	u	3
	w	2
	y	1

AVKO exercise
used to teach the letter h

ash hash; ash cash; ash rash ash
rash crash; ash mash smash;
ash rash trash; ash lash flash;

Analysis	Letter Patterns	No. Used
	ash	7
	h + ash	1
	c + ash	1
	r + ash	3
	cr + ash	1
	tr + ash	1
	m ash	1
	sm + ash	1
	l + ash	1
	fl + ash	1
	Total ash's	18
	Total h's	19

Traditional Order of Presentation

- Lesson 1: a s d f j k l ; (8 keys)
No problem to learn for the average student who is also well motivated and who tries. Yet, it is nearly impossible for students with learning, reading, or emotional problems to master no matter how well motivated or how hard they try.
- Lesson 2: e h shifting left & right
- Lesson 3: t i . (period)
- Lesson 4: Teaching GWAM (Gross Words A Minute) Review adefhijklst
- Lesson 5: c u
- Lesson 6: r z o
- Lesson 7: w g n
- Lesson 8: Tabulating and Review
 - a
 - c
 - d
 - e
 - f
 - g
 - h
 - i
 - j
 - k
 - l
 - n
 - o
 - r
 - s
 - t
 - u
 - w
 - z
 - .

AVKO's Order of Presentation

- Lesson 1: a d l (3 keys)
No problem to learn for any student who is motivated and tries, even for those students with learning, reading, or emotional problems.
- Lesson 2: s ;
- Lesson 3: f t
- Lesson 4: r j
- Lesson 5: c k
Note: From this point on AVKO introduces at most one new letter per lesson.
- Lesson 6: i
- Lesson 7: h
- Lesson 8: e

Note: At this point AVKO has presented only 12 letters. To ensure mastery of those 12 letters and the spelling patterns available, no new letters are introduced during the next 6 lessons. The concept of something new for each lesson is accomplished by introducing other elements of typing such as shifting and punctuation marks.

Traditional Order of Presentation Continued

- Lesson 9: v p ,
- Lesson 10: q x m
- Lesson 11: b y ?

Note: The entire alphabet and keyboard has been taught in only 11 lessons in traditional keyboard texts. This is fine for students who have the requisite reading skills, learning skills, and physical coordination. However, AVKO's presentation takes an additional 17 lessons to finish the presentation of the keyboard. This slower rate of presentation allows the slower students to achieve mastery of the keyboard without holding the "faster" students back.

AVKO's Order of Presentation Continued

- Lesson 9: shifting
- Lesson 10: , (comma)
- Lesson 11: ?
- Lesson 12: ' (apostrophe)
- Lesson 13: Review
- Lesson 14: "Quotation marks"
- Lesson 15: g
- Lesson 16: m
- Lesson 17: n
- Lesson 18: b
- Lesson 19: o
- Lesson 20: p
- Lesson 21: !
- Lesson 22: u
- Lesson 23: w
- Lesson 24: y
- Lesson 25: v
- Lesson 26: q
- Lesson 27: x
- Lesson 28: z

Note: Because students progress at their own rate of speed in AVKO's program, the keyboard can be master in as few as 11 days (cf. traditional texts) or as many as 60 days.

To test AVKO's theories have one group copy these paragraphs either longhand with pencil or on a typewriter.

tNo:e dGoo rdrseae hvae bltui-ni
rspnsseoe to lpsnlgei pttm,srae os
hyte cna syleai rdea nda pllse nn-o
rwsdo lki:e dptneoi,o pctnii,o
ncradtn,kioaio nda cglngi.i dGoo
tpstsyi rae gdoo rdrseae hwo qckylui
bldui pnuo ehtse bltni-iu rspnsseoe
ot dvlpoee wne pptrsna.e

dGoo rdseae lrdyaea knw"o
sbcnscsl"yuoioiu hte pptrsnae os htye
dnto' ndee trngaii ot tpye yb
ptrts.nae

rPoo rdrseae dnto' nkwo hte ptrnsae
nda nt'do nwko hte wdrso os hyte
mtsu ypte ltree-yb-ltr,ee srtkoe-yb-
srtko.e

rPoo rdrseae ndee gtrnrii ni
ptrnsae ot bcmeoe gdoo tpsyt.si

Note: the paragraphs above are identical to the paragraphs in the other column with only one small difference. We deliberately scrambled the letters and punctuation marks so as to obliterate normal patterns and to force letter-by-letter copying.

Have the other group copy these paragraphs in the same way as the first group.

Note: Good readers have built-in responses to spelling patterns, so they can easily read and spell non-words like: depotion, piction, incordation, and cligging. Good typists are good readers who quickly build upon these built-in responses to develop new patterns.

Good readers already "know subconsciously" the patterns so they don't need training to type by patterns.

Poor readers don't know the patterns and don't know the words so they must type letter-by-letter, stroke-by-stroke.

Poor readers need training in patterns to become good typists.

Note: If a group of good readers can type or copy both sets of paragraphs equally well and equally fast, then, and only then, would AVKO's theories be all wet. Or just try to copy both sets yourself! We're sure you'll understand why AVKO's approach works so well with students who otherwise would fail in traditional typing or keyboarding classes..