THE ESSENTIALS
Of
KEYBOARD PEDAGOGY

A series of 10 monographs on basic elements of piano instruction

By

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First Topic:

Sight-Reading and Musical Literacy

SIGHT-READING AND MUSICAL LITERACY

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In approaching the subject of this paper, I am reminded of the old story about the young pianist who was auditioning for a job as accompanist. When asked if he was a good sight-reader, his response was a definite "yes." After a performance with numerous hesitations, wrong notes and strange rhythms, the interviewer commented, "I thought you said you were a good sight-reader." To which the young man replied, "I am--but not at first sight!" Regrettably, it has been my observation that far too many people, both amateurs and professionals, have major problems with their "first sight-reading" skills.

The Harvard dictionary defines "sight-reading" in terms of the Italian, *Prima Vista,* "the ability to read and perform music at first sight, i.e., without preparatory study of the piece." For the purposes of this paper, I would suggest a slight modification: "the ability to read and perform musical score at first sight *without preliminary keyboard sampling or practice."* This would allow for a brief visual analysis without any tactile r aural reinforcement before actual performance is attempted.

Sight-reading musical symbols is the means by which we explore and eventually learn new repertoire. Since this is how we get the initial impression of each new work, it is crucial that our expertise in performing (decoding) these symbols be of the highest order. Playing wrong notes, rhythms, and phrasings preclude our experiencing the real sound of what the composer has written. Therefore, we get an erroneous first impression. This could result in the outright rejection of a new piece, or be the first step in a painful process of replacing wrong responses with correct one, since habits began forming with the first performance.

As regards individual sight-reading skills, it has been my observation that rarely are piano students, no matter how many years of study, able to sight-read material at the same level as their memorized repertoire. For example, if a student were performing a Clementi Sonatina, it would seem reasonable that, with no coaching, he or she could sight-read a comparable Clementi Sonatina, with accurate phrasing, dynamics, fingering, and without breakdowns, albeit somewhat under tempo. In reality, it is evident that too many students are playing memorized repertoire far above their sight-reading levels.

Another observation intertwined with the first, is the high degree of musical illiteracy in this country. Millions of people regularly bob and clap to excruciatingly loud sounds, yet very few in the audience can read even the simplest line of music. Somehow, they never seem to question why they can't read music, as if it were inevitable! Perhaps a partial explanation of this is found in Howard Gardner's statement, "…whereas, in the case of language, there is considerable emphasis in the school on further linguistic attainments, music occupies a relatively low niche in our culture, and so musical illiteracy is acceptable."

The irony is that current research indicates that musical experiences may improve children's IQ's, and that even just listening to music can raise young children's reading scores (Weinberger 1998). With our present computer technology and digital pianos, opportunities abound for conducting research on the eye movements of students who exhibit varying degrees of sight-reading proficiency. It would be interesting to study the development of reading skills from the beginning and compare the eye movements of good readers with those who are experiencing problems.

Since inferior reading skills inhibit the development of musical literacy, it seems logical that improving these skills would ultimately increase literacy. Whereas strong reading skills lead to limitless vocational and professional musical opportunities, poor skills portend frustration, limited personal fulfillment and the exclusion of musical performance from one's daily living.

For most people, good music reading skills are the key factor in determining whether or not music is part of their lives. Therefore, we must address the problems of why so many people are musically illiterate and so few able to sight-read music. The purpose of this paper is to examine certain facets of these problems, and to suggest strategies for change, based on years of personal observation and teaching experiences in various learning environments.

My initial concern and experimental work with music reading skills dates back to teaching at the Juilliard School of Music in the late 1940's and early 1950's. In general, my students were good performers with ample technique, but limited sight-reading skills. Although most memorized repertoire in a reasonable amount of time, that seemed to be accomplished more "by ear" (listening to recordings and hearing others perform), than from reading and interpreting the printed symbols in the score! I was intrigued by the fact that these talented students were sight-reading far below the level of difficulty of their repertoire. Unfortunately, since all had started piano instruction with other teachers, I had little data for analyzing their previous learning experiences.

The most nagging problem in teaching the Juilliard students was that there was scarcely time to polish repertoire, let alone time to address their reading and analysis problems. Obviously, this instruction was geared more toward memorizing pieces (turning out products) than building sight-reading skills (developing processes). Due to time constraints during the lesson, in-depth analysis of repertoire was minimal.

Ironically, what my students really needed was chromatic harmony to analyze their repertoire, yet they were being given the prescribed diatonic theory course, which had limited application to their piano lessons. It was my frustration over the disparity between their low level functional musical literacy and advanced keyboard performance skills that aroused my interest in working with students with no previous keyboard instruction.

As my plans evolved, it became evident that, in addition to working with young beginning piano students with no prior instruction, I should also include students who had studied previously with another teacher. I could then track and compare the problems and progress of both populations for as many years as possible.

Toward these goals, I opened my experimental piano studio in Scarsdale, New York, in the late '40's with approximately 30 absolute beginners and 30 transfer students. This studio remained in operation in Westchester County for over 25 years. In 1953, a similar laboratory program for the children of faculty and graduate students at Teachers college, Columbia University, was instituted in the Agnes Russell Center, which later became the Community Music Center of Teachers College.

Initially, the instruction in the Scarsdale studio included a weekly private lesson for repertoire and technique, plus a group lesson of theory, ear-training, sight-reading and improvisation, related to the private lesson. Later, a dyad (2 students) would replace the private lesson to achieve better use of lesson time and to provide regular ensemble (duet) experiences.

As incentive for developing strong, effective, reading skills, students needed realistic, "short-term" goals, otherwise, becoming a good reader might be a very nebulous concept, particularly for those transfer students who had already experienced reading problems. To provide the mechanism through which students could achieve their goals, "open classes" would be held every 6 weeks, in lieu of the regular group lesson. At that time, parents could observe their child's progress in relation to the group as a whole. This session gave an overview of the harmony, ear-training, improvisation, sight-reading, repertoire and technique being assigned in both the partner and group lessons.

In addition to sampling currently assigned solos and duets, students demonstrated their abilities to sight-read and transpose materials at the same level of difficulty. If any recurring reading problems surfaced, a practice assistant (another student with more experience) was assigned for a few weeks to help the student successfully cover the daily sight-reading assignment and get back on track. The use of a practice assistant was not considered a stigma, but rather part of the process of becoming a good reader. This kept all students' reading skills on par with the repertoire being studied.

Keyboard sight-reading involves complex cognitive, affective and psycho-motor interactions, in which specified fingers must depress and release certain keys in a precise time sequence at indicated dynamic levels. Simultaneously, similar or quite different actions may involve the other hand. Even with these complexities, keyboard sight-reading need not be intimidating, if teachers present from the beginning the basic concepts of musical structure, which will be applied again and again at each succeeding level of advancement. However, all students (whether young or adult) must practice from the beginning thinking about several things simultaneously as they sight-read music. And, they must be able to read level I materials easily before attempting level II.

The cognitive aspects of sight-reading music involve recognizing with split-second precision various musical signs, symbols, and structures. The psycho-motor coordination provides the skill to perform accurately in a flow of beat, rhythm and intensity. If this "flow" is interrupted, the musical sounds and effects are immediately lost. One cannot "stop the music" to analyze or reexamine a certain portion, since music, as time art, always exists through its ongoing pulse or beat. Even a sustained note occupies time, and ends or fades out after its allotted number of beats.

As one sight-reads a new piece of music, there is both the recognition of previously leaned symbols and also the anticipation of what might come next that is different. Thus, the good sight-reader combines the cognitive data (intervals, chord patterns, sequence, repetition, etc.) from previous experiences, with some musical "hunches" of what logically might lie ahead. However, this highly useful type of "mental coordination" rarely happens on its own. Therefore, it must be thoughtfully and carefully nurtured b the teacher from the beginning of music instruction.

The implications of current research regarding music and its effect on human brain function are considerable as related to the development of keyboard sight-reading skills and musical literacy. Early musical experiences for 3, 4, and 5 year olds should be regarded as indispensable perquisites for beginning traditional keyboard instruction. Activities involving bodily movement to develop large muscle coordination with beat and rhythm should be combined with activities exploring concepts of high-low, fast-slow, and loud-soft. The piano keyboard, used as a "resource instrument," is ideal for introducing and developing these concepts as well as for nurturing very young children's creative potential. This "play type" learning environment provides a natural and effective background for the more formal type of piano instruction for 6, 7, and 8 year olds. The ability to feel rhythm and beat, to visualize melodic contours, and to hear dynamic changes in music will facilitate the development of reading skills.

At that first lesson, teachers should consider each student's mind as a *tabula rasa*, i.e., "the mind before it receives the impressions gained from experience." There are no habits, either good or bad--only anticipation of what is ahead. From this beginning at "ground zero," students start to develop their musical literacy, sight-reading skills, technical coordination, creative abilities, aural acuity and *feeling* of music--all of which should be interrelated and mutually reinforcing.

Sight-reading fluency should be a primary goal, since the student's success in developing musical literacy depends on it. There must be sufficient time for the daily practice of sight-reading assignments to

insure that students are able to read at the same level as the repertoire being studied. Above all, students must not be allowed to paint themselves into the no-win corner of poor reading skills, just because they are spending too much practice time memorizing pieces by rote.

To help students achieve musical competence and independence at each level of their study, teachers need, from the outset, well thought-out strategies for developing strong reading skills. The following teaching strategies will help initiate and nurture young students' sight-reading skills from the beginning.

1. At the very first lesson, demonstrate "peripheral vision" to show students how they can actually see their fingers on the keyboard without looking down at them. While keeping their eyes on the book, let them touch the keyboard ant several different places, as you point out that they are actually seeing both their hand and the keyboard.

2. The black keys are essential in developing the necessary tactile sensitivity and spatial awareness to find specific notes by "feel" rather then by sight. The use of black keys as musical "Braille" facilitates reading in whatever key comes along. Who knows, they might want to sample Bach's 48 Preludes and Fugues some day, which could involve any or all of the major and minor keys. Being able to read in any key is an essential component of good reading, and the analogy here might be that of teaching children to swim before they develop a fear of water.

3. Keeping nicely curved fingers comfortable "in, on, and around" the black keys while developing the use of peripheral vision will get sight-reading going on the right track. Above all, students must avoid the bad habit of constantly glancing at their hands while trying to read notation. It is extremely important to get fingers accustomed to playing near the fall-board, rather than out on the edges of the white keys, because of the key variety and chromaticism in much of the standard repertoire. Chopin's "Etudes," opus 10 and 25, are prime examples of pieces that make us play "in, on, and around" the black keys.

4. Students should develop "the eye that hears and ear that sees," but in order to do this, they must acquire the cognitive information which allows them to learn through meaning and understanding, rather then by rote repetition. They are learning to *think musically*, which means that they must learn how to *think in motion*. Being able to look at 3 notes on the page and immediately hear them as a particular chord or sound is an example of "the eye that hears." To hear 2 tones, such as D and A, sounded together and recognize that sound as a "perfect fifth," is an example of "the ear that sees." Since a working knowledge of rudiments, chord names, intervals, harmonic progressions, and musical forms is essential in learning how to "think musically," this should be an integral part of keyboard instruction form the beginning, not postponed until high school or college.

5. In the initial stages of learning to read notation, teachers should give students a brief demonstration of eye movements from left to right across the page. In sight-reading at the piano, the eyes focus on the musical symbols, then the brain calls for psycho-motor responses by the fingers. The eyes quickly move and focus again, with more (and probably different) messages to follow. This "focus and move" sequence, "(thinking in motion)" is repeated over and over as we read music. So that the eyes can "hear" the symbols that they are about to read, it is always a good idea to scan the piece before playing to identify patterns and get a "feel" of the rhythm.

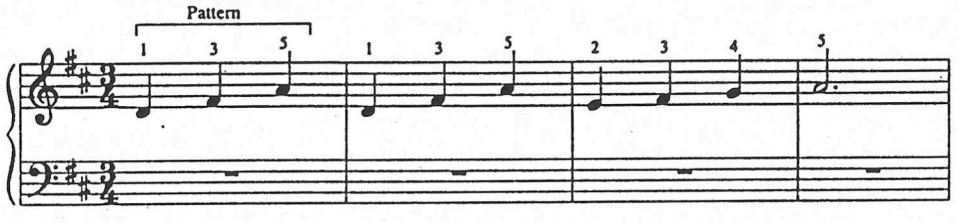
The daily practice period should be a time of musical exploration and enjoyable problem-solving with realistic goals for achievement. Good readers can accomplish more during practice sessions, since

they are more self-reliant and less dependent on the teacher. Bust teachers must provide students with the appropriate materials in logical learning sequences to insure long term expansion of reading skills and musical growth.

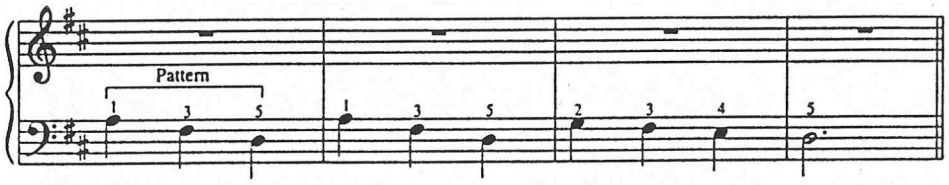
Here are several examples illustrating the kinds of materials and activities which engender fundamental processes of effective keyboard sight-reading. In this first example, students are introduced to the following basic concepts of melodic movement:

1. A 3 note melodic pattern (motive) moves upward by skips
2. The melodic pattern is repeated
3. A melodic pattern may also move upward by steps
4. The melodic phrase ends on a long note with same duration as 3 previous notes

The same basic concepts of melodic movement found in this 4 bar phrase can also be found in thousands of compositions in all periods and levels of music literature. From the outset, students should read by recognizing configurations, rather than trying to name each individual note, which is analogous to reading words by first spelling each one.

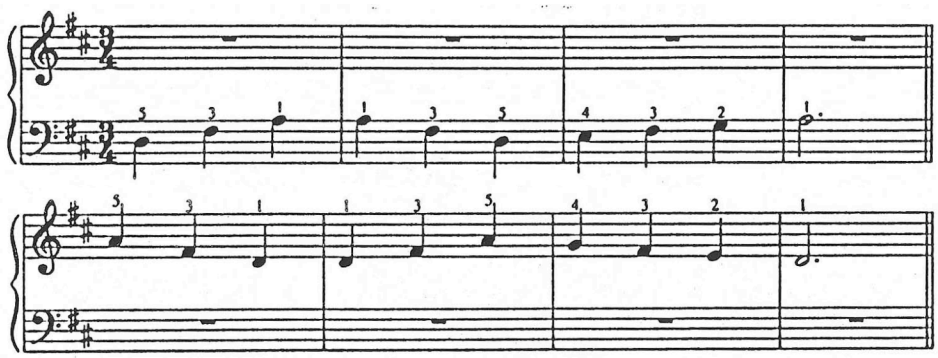


In the second line of this example, students read melodic patterns for the left hand, using the same fingering as in the first phrase. The concept of "pattern" is reinforced, and a new concept of "inversion" is introduced. Whether students are right or left handed, they must deal with the same concepts as they read skips and steps in both hands.



As previously mentioned, keyboard sight-reading involves processes of getting specified fingers to respond to visual symbols with split-second timing. Therefore, developing the skill to get the correct finger to play a certain key at the proper time must be a high priority during the initial phase of instruction. For example, in the above two lines of music, teachers should help students recognize the need to use finger numbers 1-3-5 or 5-3-1 when playing melodic skips, and 1-2-3-4-5 or 5-4-3-2-1 for consecutive melodic steps. During this first year, students must learn certain basic fingerings which go logically with the various patterns of music.

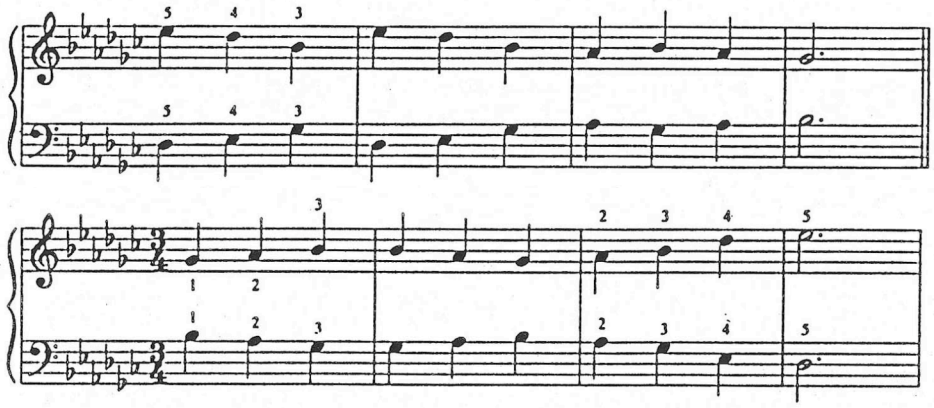
Studying several variations of assigned materials helps students find all similarities and differences, which, in turn, simplify sight-reading and expedite learning. Students will benefit from comparing the following example with the one above.



As students expand their sight-reading skills, they soon realize that more is being accomplished during daily practice. This generates a positive attitude about "why music" and provides incentives for regular daily practice. In contrast, students with poor reading skills often have negative attitudes about practicing, since they have so little to show for their efforts.

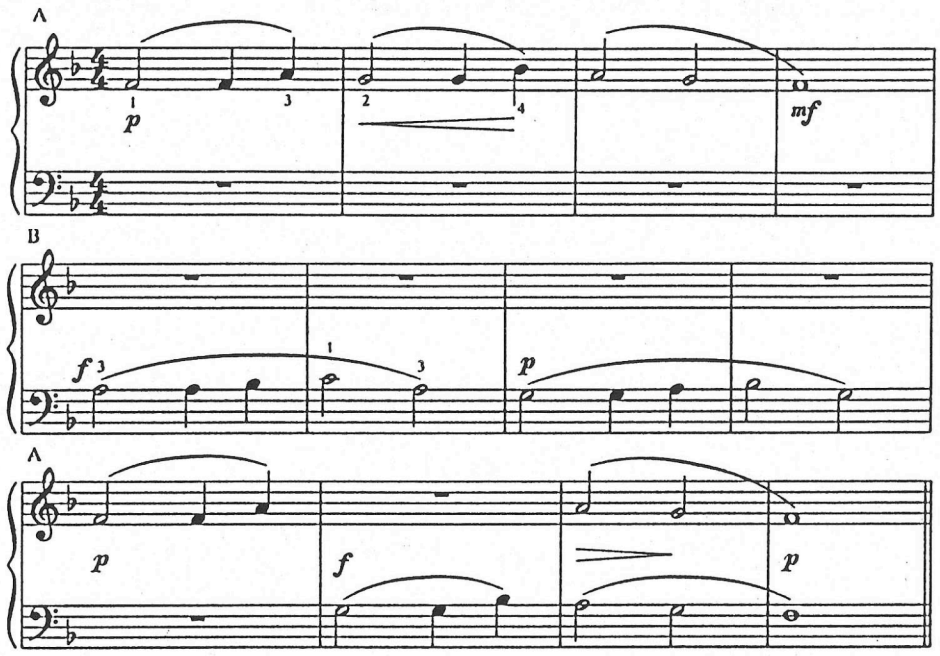
Frequently, young beginners who can read with one hand alone, experience real difficulty sight-reading with both hands together. In checking students with reading problems, I often found that they were looking at either the treble or the bass part, but not both parts simultaneously. Therefore, one hand was getting no messages!

To facilitate reading in both clefs with both hands together, try using two lines moving in contrary motion on the pentatonic scale. This makes left/right hand coordination much easier, since students deal with the same finger number for both hands, rather than a different finger number in each hand. Also, the black-key pentatonic scale is easier than the white-key diatonic, since it consists of raised keys only, neatly arranged in two's and three's. By simplifying the technical aspects, students can concentrate on recognizing melodic patterns, rather than worrying about which finger plays which note. After students gain some control with contrary melodic movement, parallel line reading can be successfully introduced.

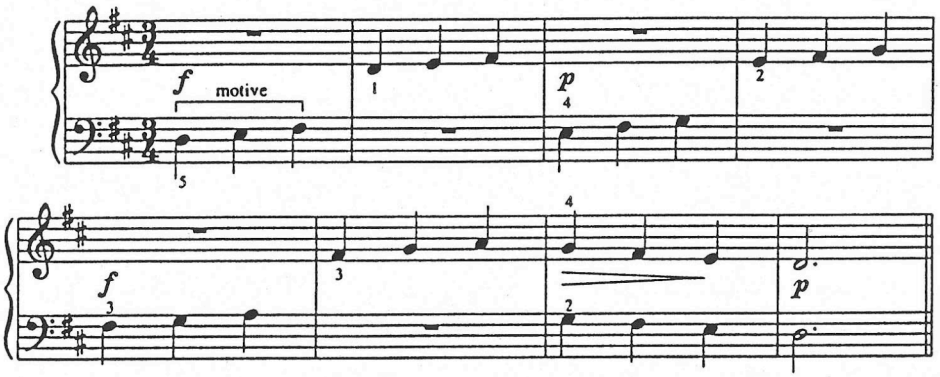


During the initial reading of any piece, students should get the correct notes, rhythm and fingering as they observe all markings for phrasing and dynamics. This is quite possible, unless the

pieces are technically too difficult and have musical problems for which students are not prepared. Again--we should never let a "gap" develop between the level of the student's sight-reading expertise and the level of pieces being studied. The following example gives students experience dealing with legato touch, phrasing, and dynamic change at the beginning level.



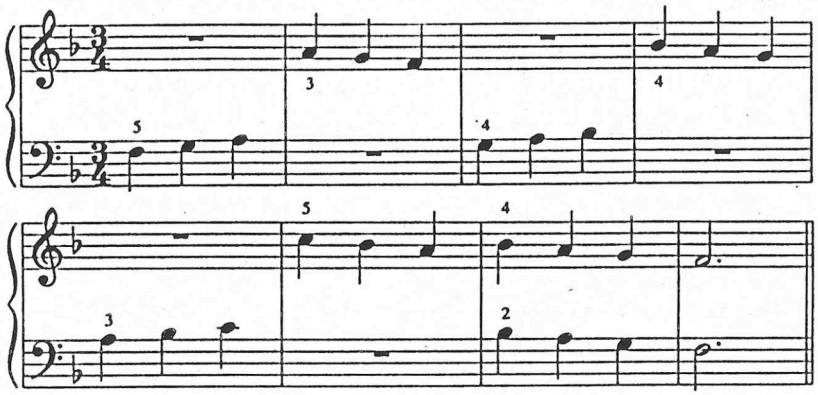
Students' reading skills can be enhanced in ways other than "first sight-reading." One particularly enjoyable means is through "Creative Reading," which takes place after the initial reading of a piece. In the following example, which is actually an introduction to the concept of "canon," students are sight-reading a 3note motive which is repeated in the second bar at the octave. These two bars recur as sequences in bars 3-4 and 5-6, followed by an inversion of the 3note motive in bar 7, played by both hands.



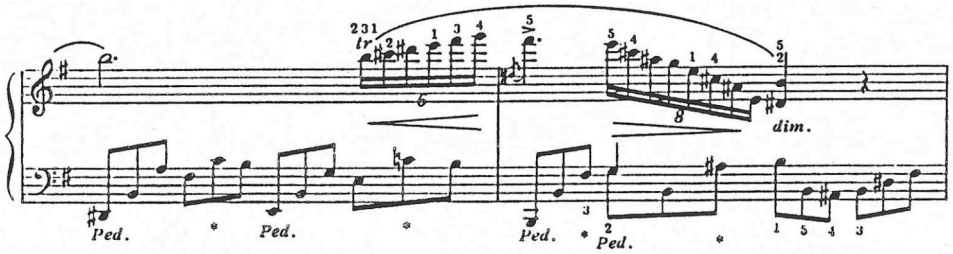
After sight-reading this example, students should think of as many different ways as possible to use the motive. While playing each variant, they look carefully at the music to think about the changes they are making. When this is done in the group lesson, students always manage to surprise each other with "here is another new one!" This illustrates that good sight-reading and creative thinking should go hand in hand.

Here is an example of how one could invert the motive in the 2nd, 4th, and 6th bars and keep the rest the same. After playing in F major, it may be transposed to several adjacent keys, followed by more Creative Reading. Here are a few suggestions:

a. Start with the right hand instead of the left hand
b. Invert the initial pattern
c. Change the patterns by using repeated tones, skips, etc.

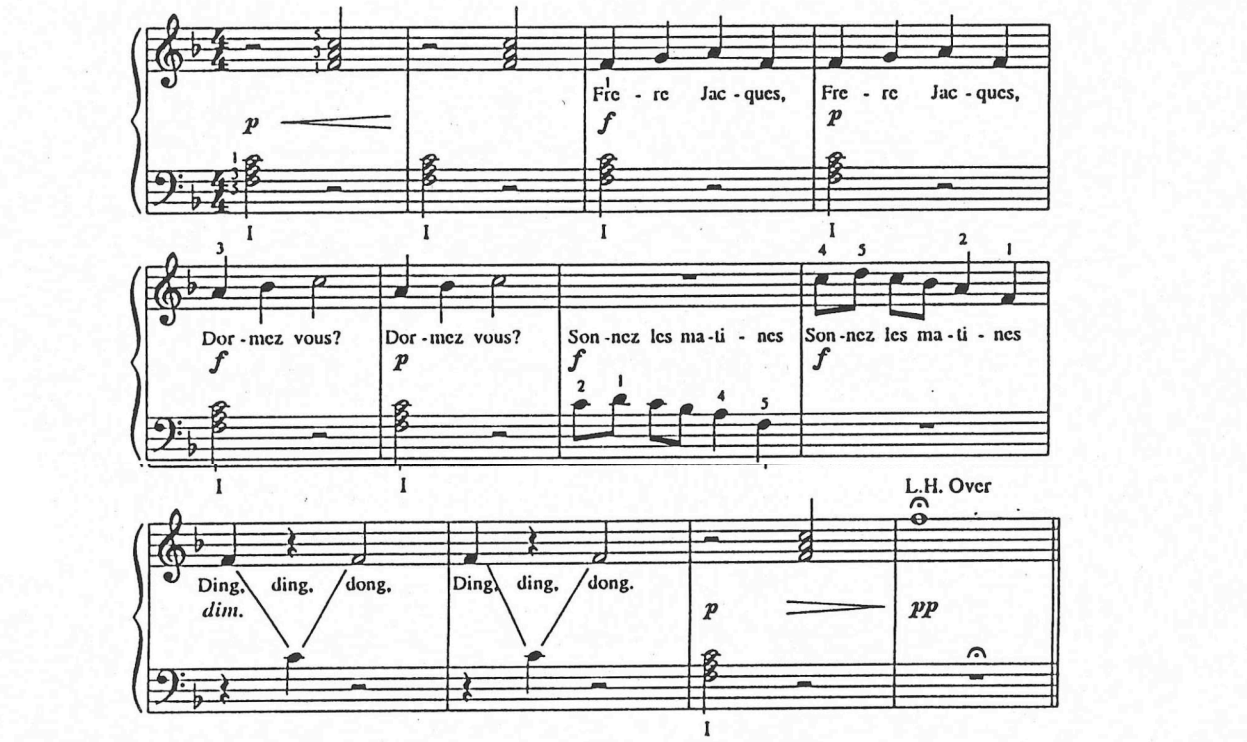


Instrumentalists and vocalists, while performing a solo, usually have one or more other performers providing an accompaniment. However, the piano soloist not only performs the melodic part, but simultaneously provides the harmonic and rhythmic accompaniment on the same instrument. The span of notes being performed at any given time may be considerable, ranging from leger lines below the grand staff to those well above the treble clef. Therefore, advanced keyboard performers encounter a vertical component in reading not found in other performing media.



Years before students are asked to read pieces at this level of difficulty, the mental and physical processes for dealing successfully with right hand melodic lines over left hand accompanimental patterns must be initiated. For many young piano students, sight-reading a simple left hand chordal accompaniment with melody in the right hand, causes major frustration, which if not handled properly, can spell the "beginning of the end." Inner conflicts occur as students struggle to recognize and perform vertical configurations (harmony) in one hand as they read and perform linear patterns (melody) in the other. Real sight-reading problems develop as students, in their struggle to play the bass part, get in the habit of continually looking down at the keyboard to find the notes. Too often, they loose their place in the score, can't find the next note, and have a "break-down" in performance.

The techniques for reading melody and harmony simultaneously should be introduced when chords are given to first year students. As in all previous sight-reading activities, students should first scan what they are about to play in order to avoid unhappy surprises. To minimize potential problems of putting melody and harmony together, let students play several songs that can be harmonized with only the I chord. After a little skill is achieved with this, they are in a much better position to deal successfully with chord change without having hesitations and wrong notes.



With the introduction of the Dominant Seventh chord, the stage is set for dealing with cadences, more complex phrase structures, and part forms. During the first year of keyboard instruction, all students should develop "Level I reading proficiency" (including Creative Reading experiences) with the following:

1. Pieces harmonized with the I, IV and V (V7) chords
2. Pieces in major (Ionian) and minor (Aeolian) modes, plus at least Dorian and Phrygian modes
3. Bi-chordal and bi-tonal sonorities
4. Twelve-tone (serial) composition
5. Pieces built on Pentatonic and Blues scales
6. Changing Meter
7. Mutated triads

It is essential that all Level I students become competent sight-readers in these musical systems in order to function successfully at Level II and all subsequent levels. Each level presents and amplifies the pre-requisites for successful learning at the next level. These are the "stair-steps" for musical literacy.

Here are a few observations and generalizations, mixed in with some "do's and don’ts:"

1. Be sure that all students are developing a functional "musical literacy" through their daily practice sessions.

2. Require regular public performance which demonstrates students' current reading skills. At the first sign of any lag in reading, assign a "practice assistant" (usually one of your good teen-age students) for 2 or 3 sessions per week to insure that sight-reading assignments are done properly.

3. Insist on a good hand position (no flat fingers) and a responsive technique. Digital control is a requisite for good sight-reading.

4. Ensemble sight-reading helps students learn how to listen to each other, and to keep going to avoid "break-downs."

5. At regular intervals, let some of your advanced students demonstrate sight-reading and creative reading skills for the younger students to show that these are both fun and achievable.

6. Students should be able to sight-read and analyze each piece that they are being assigned. If they cannot do this, it is an indication that the piece is too difficult, and not appropriate material at that time.

7. Students must broaden their theoretical knowledge at each level to match their reading and technical skills.

8. At the intermediate and early advanced levels, teachers should resist the temptation to assign a long piece, rather than several shorter ones. Reading skills are greatly enhanced by the variety of styles encountered during the practice period.

9. Rote memory is the enemy of good reading skills, and sure recipe for musical disaster.

10. Don't let contests, festivals, adjudications and recitals disrupt the learning sequence for your students. If preparation for these can be handled within a month to 6 weeks time-frame, they may be worthwhile. However, anything past that is probably a waste of the student's time and the parent's money. Students would be much better off expanding their reading skills, so that music will be a part of their lives 15 or 20 years in the future. They certainly will not be playing in contests then!

11. Set Level IV and/or Level V as the long range sight-reading goal for your students by the age of 12 or 13. At those levels there are literally thousands of pieces that anyone could enjoy reading and learning if they so desire. This repertoire includes selected compositions of major composers from the Baroque period through the 20th century. Students who decide at the Level V juncture to pursue music as a career will have the musical background and reading skills to deal effectively with advanced literature. However, the vast majority, who will not elect music as a career, will have at their fingertips the skills and musical understanding to read and explore some of the most beautiful music as they may choose.

As a concluding thought for this paper, the parameters of sight-reading and musical literacy are so great, that the temptation is to go on forever. However, with the realization that the surface has only been scratched, it is hoped that the views expressed will prompt others to join in a concerted effort to raise the levels of musical literacy dramatically in this country and to make effective sight-reading skills the *sine qua non* of the keyboard teaching profession.

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