

Stimulus/Response . . . The Secret of Sightreading

John Gates

It is typically the responsibility of school instrumental instructors to teach ALL the band and/or orchestra instrument techniques and skills that a student musician must master:

- Woodwinds (clarinet, flute, saxophone, oboe, etc.) and brass (trumpet, trombone, tuba, horn, etc.) learn intricate fingering combinations, slide positions, and develop facial muscles to control their pitch and sound.
- String (violin, viola, 'cello, and bass viol) learn bowing techniques and complex fingering positions and pressure applications.
- Drummers/percussionists have their own set of basic techniques to master for several instruments: snare drum rudiments; mallet techniques for vibraphone, xylophone, marimba, chimes, etc.; tuning and etude studies for the timpani; the percussion hand instruments (cymbals, triangle, tambourine, etc.); not to mention the complexities and challenges of the drumset.
- In addition to the “technical issues” the student must master the skill of sightreading and develop confidence in their ability to “sit down and play”. This is the case whether auditioning for first

chair in high school band... or for the University of North Texas One O’Clock Lab Band, or when auditioning for “gigs” in the real world. The person who PLAYS the best for the band gets the chair!! Finding help to learn these skills is often very difficult.

After serving in the US Army and playing in the NORAD Band and the Studio Band (now The Jazz Ambassadors) of US Army Field Band, I returned to UNT in 1971 where I played in the One O’Clock Lab Band and then became the drumset instructor for three semesters. I realized as I auditioned (another responsibility) 75 drummers for the eleven 20-piece jazz lab bands at UNT that, while many had great practice room technique, only a few had an understanding of the role of the drummer in a big band and the skills to adequately “play the chart” and not get lost in the music or (more importantly) lose

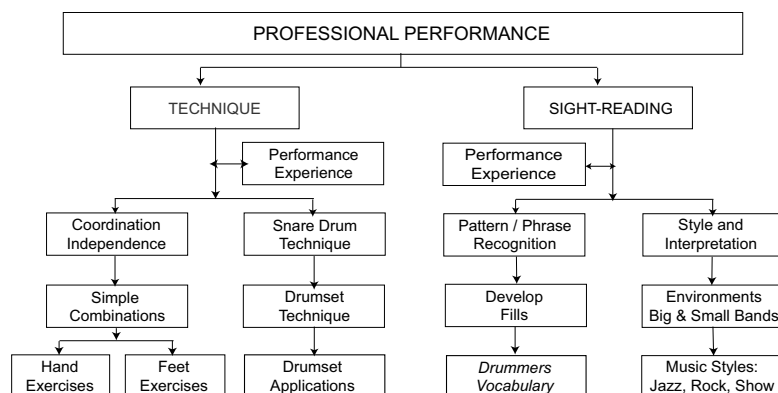
the band. I set out to create a system that would “close the gap” between “practice room technique” and “playing for the band” based on my experiences as a student, as a teacher, and as a player.

This system eventually became the basis for my Masters Project and Thesis for my Masters of Arts degree in Instructional Technology which I received from Teachers College, Columbia University in 1992. While the “Master Plan” was to develop the material to use for all band and orchestra instruments, the first version of MusicLab was for drumset... for me the perfect place to start.

About the System – The sum of its parts.

There are two main areas to concentrate on in the training of a drumset player. Figure 1 below shows the development of the two main areas: drumset technique and sightreading.

Figure 1: Drumset Technique and its Application in Sightreading



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Technique

The “prerequisite” for drumset training is solid reading skills and snare drum technique with a focus on mastering the rudiments and using them in solos and etudes, both orchestral and military in style. Rudiments applications on the drumset are also studied.

Much of applying the basic techniques of drumming to the drumset is the development of motor skills, like the “scratch your head and pat your stomach at the same time” challenge. The physical act of playing the drumset depends on developing physical coordination and independence of each of the limbs. It is not unusual for each limb to be playing a unique pattern in direct opposition to what the other limbs are playing, a difficult skill to master and one which must be approached with careful planning. The place to start this study is with Jim Chapin’s Book, “Advanced Techniques For The Modern Drummer” for the swing styles and for fusion and rock, books by linear drumming gurus Gary Chaffee, Marco Minneman, and Rick Latham among many others. (*Amazon.com* has them) In addition, attention is paid to the study of styles of drumset music from ragtime and Dixieland to today’s current styles with an emphasis on Latin music.

Along with all this practicing, listening, and study the drummer is encouraged to PLAY as much as possible. Practicing alone is necessary, but the experience of playing with others is invaluable. As a student I jumped at any chance to play . . . any kind of music.

- I played in the San Antonio Youth Symphony. It was invaluable for learning how to follow a conductor—every one is different—and how to approach orchestra music.
- I played in all kinds of small bands—dance, rock, and jazz.
- I played with a wide assortment of great players and learned a lot about playing a “casual”.
- I played with big bands as well.
- Playing with the Latin bands in San Antonio was an invaluable experience. The drum book was always missing and I would watch the fourth trumpet part—and learned about phrasing and articulation.

Sightreading

When the student reaches the point that s/he has enough technique to play the drums, the other half of the equation is introduced: sightreading, which is one of the two or three most important skills to master. The Challenge is shown below:

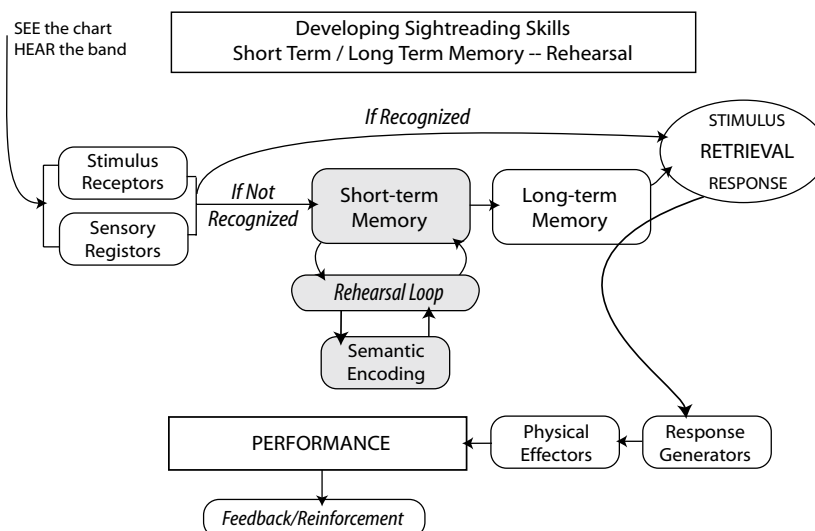


Figure 2: The Short-Term Memory - Long-Term Memory process by Gagné, Briggs, & Wagner (1988).

Stimulus/Response . . . The Secret of Sightreading

When playing a piece of music for the first time one of three things typically happens:

1. The drummer instantly recognizes the figures in the drum part and that stimulus produces an immediate and accurate response (from long-term memory) which tells the response generators what to do which sends the instructions on to the physical effectors which carries out the instructions and plays the figures perfectly.

2. The figures “look familiar” and the drummer makes an attempt to quickly “figure out” the figures based on incomplete information and frequently ends up falling measures behind the band or getting lost altogether.

3. The drummer does not recognize the figures, and must go into “practice mode” until s/he has mastered the figures and puts them into “context” (Semantic Encoding).

Options 2 and 3 typically produce a less than satisfactory performance.

Perhaps one of the most essential elements of the learning process to understand is the human memory system. Memory consists of three interacting parts and each has a specific function and a defined duration:

1. **Sensory Memory** - Sensory (audio, visual) memory makes us aware of meaningful information

2. **Short-Term Memory** - Short-term or working memory is our “scratch pad” for thinking.

3. **Long-Term Memory** - Long-term memory is highly stable and stores information for a long time.

If the music figure (the information) is not recognized, it must be learned. Strategies for remembering are represented by the shaded area in the graphic Figure 2 and include:

1. **Rehearsal** (a.k.a. practice) is the process of repeating something accurately again and again. Rehearsal is the basic means for maintaining information in short-term memory which eventually moves it into long-term memory.

2. **Organization** is the arrangement of information according to a system or context, i.e. placing what is to be learned into related groups (measures, phrases).

3. **Elaboration** involves relating material that has already been learned to new material.

At UNT I used every technology tool I could find to create a “live” playing context. In 1972 it was a portable hi-fi turntable and a stack of well-worn big band albums that I would carry from practice room to practice room for the lessons.

This is the point that the MusicLab instructional design “kicks in.” The central strategy of MusicLab instruction was to provide an environment as close to a real playing experience as possible, where the student drummer or any other instrumentalist could develop an understanding of the “performance” experience. At UNT I used every technology tool I could find to create a “live” playing context. In 1972 it was a portable hi-fi turntable and a stack of well-worn big band albums that I would carry from practice room to practice room for the lessons.

For the basic studies I used Ron Fink’s “Drumset Reading”, a book with “every swing figure you’ll ever see” in it. See Figure 3 on the next page.

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Stimulus/Response . . . The Secret of Sightreading

The drill is to rehearse the first line until committed to long-term memory (instant recognition). Start with short fills, and then make the fills longer until the whole phrase is one long fill (Elaboration). Do the same for line two—a variety of fills. Then combine both figures into the same phrase (line three). Ron Fink's book provides literally hundreds of these combinations.

The student is encouraged to always keep their eyes on the screen even after committing the pattern to short-term memory so that the visual pattern becomes solidly fixed in long-term memory. When this occurs the student will instantly recognize the figure the next time they see it in a piece of music and not have to "count it out" while playing. Rather, they will be ready to play a well-rehearsed fill or setup (response) for the figure (stimulus). Another advantage to learning what figures "sound like" is that if the drummer ever does get lost s/he can find their place by watching the band cues. *Not that I ever had to do that, mind you!!*

As the student progresses, patterns are combined into longer and more complex phrases until they become like 8 bar, 12 bar, or 16 bar ensemble passages. At this point the student is playing what are essentially band "shout choruses" (Organization).

Figure 3: sample from "Drumset Reading" by Ron Fink.

With sufficient practice the student drummer will develop their "drummer's vocabulary" of patterns and phrases stored in long-term memory. The drummer will be able to sit down and play with a band with confidence and without hesitation.

For more advanced players who are ready to tackle whole tunes I used the original Music Minus One Album and Book, "For Drummers Only" (MMO 4002)—the original "band without a drummer" album. See Figure 4.

In this case there is a LOT of information (good eye training! The bottom line is a typical drum part, above that are ensemble cues (a frequent alternative to the first), and, across the top, a suggested drum part with fills written out. The student can use the suggested fills as a place to start experimenting with their own ideas. Today (2007) there are many CDs with books of drum parts that provide this sort of Music Minus One experience.

Figure 4: sample from "For Drummers Only".

Stimulus/Response . . . The Secret of Sightreading

The student is encouraged to listen to big band recordings and to locate the ensemble rhythm patterns they are practicing in the arrangements. The result being they will hear the many ways pros choose to “handle the figures”. Some obvious choices to listen to are Buddy Rich, Mel Lewis (Thad Jones, Mel Lewis Orchestra and the Terry Gibbs Dream Band), Jake Hanna (Woody Herman), Louis Bellson (Duke Ellington and the Louis Bellson Big Band), the Count Basie Drummers (Harold Jones, Butch Miles, and Sonny Payne) and many others. Drummers playing with the US Army Band’s Army Blues, US Army Field Band’s Jazz Ambassadors, USAF Airmen of Note, and the USAF Academy Band’s Falconaires are all GREAT players!!

This is the “YouTube” generation... videos of the finest drummers are available at www.youtube.com:

<http://youtube.com/watch?v=P6mzjiFugHo>

Jake Hanna, Drums – Woody Herman Band, “Caldonia”

http://youtube.com/watch?v=X_5GvWEqbL8

Jake Hanna, Drums – Woody Herman Band, “Hallelujah Time”

<http://youtube.com/watch?v=V-ewGQx4Vfo>

Buddy Rich, Drums – Doc Severinsen and the Tonight Show Orchestra, “Well Get It”

<http://youtube.com/watch?v=mXrKE0cbFNO>

Buddy Rich, Drums – Buddy Rich Band, “Love For Sale”

<http://youtube.com/watch?v=sgEhcWTmMgg>

Harold Jones, Drums – Count Basie Band, “Magic Flea”

<http://youtube.com/watch?v=uX1HPIJwKCo>

Sonny Payne, Drums – Count Basie Band, “Start of Something Big”

<http://youtube.com/watch?v=9P9oFVtk4iI>

Louis Bellson, Drums – Duke Ellington Orchestra, “The Hawk Talks”

<http://youtube.com/watch?v=o7O4nmeL7hg>

Louis Bellson, Drums – Buddy Rich Memorial Scholarship Concert, 1989, “Drum Boogie”

Motivation

Figure 5 on the next page is a merging of two important learning theories—Robert Gagné’s “Essentials of Learning” and John Keller’s ARCS Theory* on how to keep learners motivated and engaged which I studied at Columbia. This matrix explains Keller’s strategy to maximize the opportunity for learning to take place. It starts with how to capture the learner’s attention, inform her/him of the intent of the instruction, introduce the material, follow through with practice/performance while providing feedback, provide an assessment, and discuss a variety of ways the learned information can be applied to other areas. Again I was gratified to find that I was using many of the techniques outlined here. *Perhaps John Pearson had “used” them on me!*

I hope this provides some strategies that you, as a music educator, can use to “arm” your stage band drummer with some valuable tools and skills. Much of the theory presented here can be carried over to the teaching of other band and orchestra students as well.

* **ARCS** - Motivation Schema outlined by John Keller’s ARCS theory (<http://www.arcsmodel.com/>):

Attention - arousing and sustaining curiosity and interest

Relevance - learning has personal value or importance

Confidence - learners believe in their ability to achieve goals successfully

Satisfaction - successful completion / reinforcement—feedback on performance

Stimulus/Response . . . The Secret of Sightreading

Figure 5: Gagné, R. & Driscoll, M. (1988). *Essentials of Learning for Instruction* (2nd Ed.). Englewood Cliffs, NJ: Prentice-Hall.

Instructional Processes	Strategies To Implement The Processes	Event	Motivational Features To Enhance Appeal
Get the Student's Attention	Show learners video clips of famous drummers playing with great bands. (See web site links on previous page.)	Inquiry Arousal (Attention)	Pro drummers are playing the same music that learner is playing
Informing The Learner What You're Attempting To Achieve	Show drum part and play music from CD. To do this at sight is the challenge.	Goal Orientation (Relevance)	Inform learner that sight-reading skills enhance pro status.
Remind students of the value of what they have previously learned	Demonstrate that sight-reading skills are derived from previous techniques.	Familiarity (Relevance)	Explain that sight-reading is developed using earlier skills
Introduce the lesson material	Describe the method used to develop reading skills - link to current music applications	Motive Matching (Relevance)	Use examples of music learner is currently playing
Clearly explain the objectives	Show how mastery of the early lessons carries through to the final ones	Expectancy For Success (Confidence)	Early accomplishments carry through to end
Invite the student to perform the exercises	Using the CDs have the learner "be the drummer" and apply the new skills	Setting Challenges (Confidence)	Introduce challenging tasks as advancements are realized
Providing Feedback	Demonstrate by word or by example how well the student is advancing	Positive Consequences (Satisfaction)	Feedback should reinforce sense of achievement
Assessing The Performance	The instructor (or learner) can compare recorded exercises with reference examples	Equitable Standards (Satisfaction)	Did student's performance measure up to original expectations?
Enhance Retention And Transfer	Provide some examples that demonstrate that the new skills will work in different musical contexts.	Natural Consequences (Satisfaction)	Discuss different applications for new skills.

John Gates grew up in San Antonio where he played in both the MacArthur (John Pearson) and Robert E. Lee (Cal Schultz) HS Bands and San Antonio Youth Symphony (Dick Cole). He spent time at NTSU and St Mary's University before "going on the road." After enlisting in US Army and playing in the NORAD Band and the Studio Band of the US Army Field Band, John returned to UNT where he played in the One O'Clock Lab Band and taught drumset for three semesters. John moved to Chicago and did a lot of show work, radio/TV commercials, and occasional pops orchestra concerts with Doc Severinsen, traveling around the U.S. After two very cold winters he moved to Los Angeles and within four weeks was playing the Sonny & Cher and (Dick) Van Dyke and Company television shows. John toured with Burt Bacharach and singers Tony Orlando, Paul Anka and Englebert. Some years later John moved to NYC where he played Broadway Shows (on Broadway and on tour). He returned to school and earned a MA in Instructional Design from Columbia University. The next several years were spent working in the developing multimedia industry at AT&T and IBM and then as Director of Web Development at The National Hockey League (NYC) and the PGA Tour (FL). John returned to San Antonio in late 2005 and joined the TBA staff in Fall 2006. His son, John III, is currently completing his last tour (of 5) of duty in the Mid-East as a US Army Special Forces communications specialist (and hobbyist drummer) and is due to retire late next year.