

The Video Tape Recorder -- An Invaluable String Teaching Tool

By BURTON KAPLAN

The success of any method of instruction depends upon the ability of the teacher to communicate the information to his student. To confront a violin student with a sound-motion picture of his work would appear to be the most direct available way to inform and convince him of the interrelation of his body postures and the sounds he produces. Film is too expensive and does not provide an immediate feedback of the information. The recently marketed home videotape recorder solves these problems, and has provided me with a method of testing this hypothesis. I have been rewarded beyond my expectations.

There are two basic ways of using TV in education. One is to show prepared (programmed) materials to the student. The other is to show the student his own performance played back on a videotape recorder. It is the latter method that has preoccupied me now for over a year. Used dynamically as a violin teaching tool, the videotape recorder has facilitated all aspects of learning. The student's concentration and clarity of attention are increased; self-confidence grows; and communication between student and teacher is significantly more effective. As a result, difficult technical skills and basic body postures are learned quickly, self-expression and a personal performing style develop, and the motivation to learn increases. In sum, students progress more rapidly than usual and experience more joy and satisfaction in their work. Moreover, it is as effective with adults as it is with young children (the youngest children I have used it with are eight year olds) and the effect does not diminish with use.

Equipment and Procedures—

The videotape recorder reproduces a high quality sound-motion picture instantaneously under almost ordinary lighting conditions. Beyond the initial investment for equipment, the cost of operation of a videotape recorder during a lesson is the price of the tape. Though at first glance it would seem expensive—a one hour reel of tape costs \$60—each reel of videotape can be used 400 times if the machine is kept in proper working condition. At that rate it costs fifteen cents for one hour of video-recording. At a maximum I record 10-12 minutes during a one hour lesson, on the average I record 4-5 minutes.

After investigating the available videotape machines, the least expensive machine adequate for my purposes in terms of resolution of the picture and quality of sound was the Ampex VR-6000. The

cost of the recorder, a closed circuit monitor, a camera and a zoom lens (\$400) was \$2700. However, because these low priced machines are new on the market and because the competition between firms is intense, an equivalent machine (Ampex VR-5000) which costs \$600 less is already on the market. At present, the difference in cost between a VR-5000 set-up (\$2100 with zoom) and the lowest price competitor (\$1800 with

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Mr. Kaplan's wide professional experience includes membership in the St. Louis Symphony, the Cleveland Orchestra, the Music Aeterna Orchestra, the New York City Opera Orchestra and the Pittsburgh Symphony Orchestra. He organized the Kaplan String Quartet which concertized extensively in the midwest.

During the 1965-66 season, Mr. Kaplan gave ten unaccompanied violin recitals in and around New York City.

As a teacher, for the past four years Mr. Kaplan has instructed 25 violin and viola students individually, and during the summer of 1966 he organized and directed a summer school for strings. He taught violin in classes at the Walden School, New York City, and since September 1965 has taught violin and viola at the Barlow School, Amenia, New York, where he also conducts an evening activity called: Twentieth and Twenty-first Century Music.

He has presented demonstrations of videotape techniques at the ASTA Southeast Regional conference at Elon College, N. C. the NYSSMA convention, the 1968 Boston ASTA, and he has a presentation scheduled for the New Jersey ASTA in April.

zoom) is only \$300, and the Ampex machine is far superior. It is inevitable that the price will continue to go down.

The operation of the videotape recorder is as simple as the operation of a sound tape recorder. Therefore, I was able to perform all the necessary operations myself. Since the student usually remains within a relatively small area during a lesson, the camera can be pre-focused and the only operations necessary are to turn the zoom lens to get a close-up or a full body shot as desired, and to push the button to start the machine. Therefore, there is no significant interference with the teaching as a result of the mechanical operations of the machine.

For the first eight months I proceeded as follows: in order to get a clear idea of the specific advantages of the videotape recorder over other available ways of

creating the necessary perspectives to communicate to the student (mirror, physical movement of the student's body, verbal explanation, imitation, soundtape recordings, etc.) I used the videotape recorder only when all other approaches did not yield satisfactory results. It inevitably produced the desired results, most of the time immediately or within a relatively short time. During the past four months, I have been much freer in my use of the machine, and the results have been most gratifying.

Video-Techniques Applicable To Violin Teaching—

Before discussing specific videotape techniques, two points should be clarified. ONE: The video reproduction of a student's playing serves an essentially different purpose from the mirror. When using the mirror, a student is not an objective spectator of his work. He has little attention left for observing himself as most of his attention is absorbed in the act of playing. This changes as the playing actions become trained and automatic, but by this time the mirror serves as a remedial device rather than a tool useful for forming good playing habits.

Most of us are excellent at discriminating the flaws in the work of others but poor judging our own work. Through videotape playback we can see ourselves as we see others, as spectators at our own performance. We then have a chance to assume the critical posture most difficult to achieve toward our own work. Moreover, on the video we can endlessly playback the elements of greatest interest which further intensifies the critical posture.

TWO: Many teachers have used sound tape recorders in instructing students. Although a sound recording does inform the student of errors in his performance of which he may not be aware, it does not give him any of the body clues necessary to correct it. An immediate sight-sound-motion feed-back of his work puts the student in a position to evaluate his work in terms of the body actions causing the sound production. In this way he is simultaneously trained as an objective observer, and as an instructor of others.

(THE EFFECTS OF USING THE VIDEOTAPE RECORDER ARE SIMULTANEOUSLY PSYCHOLOGICAL AND PHYSICAL)

1) The Reaction of Students to Using the Videotape Recorder

In most instances, students of all ages are nervous when first playing in front of the TV camera. However, within several lessons the videotape recorder be-

(Continued on page 36)

Videotape . . .

(Continued from page 35)

comes a natural part of the environment. The psychological effect of the video experience is very strong. After the first viewing of their work, most students are relieved that they are not as bad as they thought they would be. Most students become more intensely involved in the learning of the instrument. Many begin to work with more certainty, and they frequently express the feeling that they know where they're headed and feel more confident of their progress because of the conviction in the image they see and hear.

Sometimes you do get a student who has strong negative feelings about himself. Confronted with his image he may get depressed or defensive. However, he is easily reassured by his teacher's focusing his attention on obvious positive qualities and so distracting him from his negative focus, and after a few periods of work he is at ease.

2) The Close-Up and the Video Magnification Mirror

Using the close-up the student can be shown small parts of his body magnified two or three times their normal size. For example: the left hand can be magnified to fill a 23" TV screen. Working with this hyperpresence of his left hand as with a magnification mirror, the student can explore vibrato, shifting, finger movements in great detail. The magnified image on the small TV screen has the effect of intriguing the student, increasing his clarity of attention and attention span, and intensifying his concentration. By removing the hand from the visual context of the body, the close-up mirror of the TV screen increases the value of mirror type work; and besides, the student can restudy his work immediately through a sight-sound-motion playback on videotape. This has given even very young students much earlier control of difficult motions, and in focusing attention and concentration has had the effect of motivating all students, particularly poor ones.

3) Developing Successful Performing Habits

Though most students relax in front of the camera after a few lessons, it is easily possible to bring back the feeling of stage-performance pressure by making the student aware that he is playing in front of the camera and that his work is being recorded. This can be useful in training students to be good performers. By simulating the stage pressure, they can practice performing week after week and examine their performance afterwards on videotape until they are used to pressure, and get successful results under pressure.

I have done this with a number of students who all maintained the results during actual performances.

4) Video Comparison (imitation)

The most remarkable result of using the video has been the success of video comparison. If a student is having difficulty developing a specific body technique—vibrato, shifting, marlete, total body posture, bowing motions, etc.—and he is shown a playback of his work followed immediately by a playback of his teacher or any other person performing the technique correctly, it informs him what is at fault in his efforts in a way which he easily translates into accomplishing the task. This frequently occurs without further instruction from his teacher. I expect that if the student could be shown the two sequences simultaneously on two separate video screens it would be even more dramatically informative. As this requires two separate recorders and monitors, I have not yet been able to experiment with it.

5) Showing the Student his Past Work and Development

I have shown several students historical sequences of their work of three and four month intervals. These sequences included playing through pieces, working on elements of technique, and moments of behavior the camera happened to pick up. These showings have stimulated insight into technical and learning problems and have been highly motivating—from the point of view of clarifying elusive problems, and from the point of view of irritating the students to greater involvement in their work.

6) The Videotape Recorder is a Tool of Synthesis

Although working with the videotape playback, the student inevitably develops his analytic powers, the analytic viewpoint is not necessary or responsible for the effect of the video image on the learning process. The basic effect seems to stem from a confrontation with the total organic action of playing in a reproduction which is fairly close to life. Usually, the cues picked up by the student are quantitatively more than those he consciously recognizes. For example: a student working on marlete will for no apparent reason adjust aspects of his entire body posture spontaneously after viewing his work on the TV screen in a way which facilitates the motion he is trying to perform.

The most significant demonstration of this synthetic effect has occurred many times when students (particularly young students) with whom I have worked for several months without using the video have had a video lesson. Frequently, they will have developed many separate elements of their technique without being

able to integrate them into a flowing expressive-coordinated sound-motion. In all such instances, the video seems magically to inform them, to give them the clues to synthesize the separate technical elements into an organic relationship which works easily in their playing.

The Future—

Until now, my work with the videotape recorder has been with private students in one hour sessions. However, I have made a few experiments in a class setting which indicate that the videotape recorder will be invaluable. First, students in a group, watching a close-up of the part of the body being discussed by the instructor agree unanimously that it is easier to understand than when watching the instructor himself. Second, because of the high degree of involvement stimulated by the small screen and the close-up, it should have the effect of welding a class together and of involving the members of a class constructively in each other's work. This would be particularly true of young children who never tire of exploring themselves on the TV screen. They are forever in the process of change and they test themselves out all the time on video playback.

My own work as well as that of others in various fields has shown that using the video has a significant effect on improving the quality of work of the poor student. I have had students of eleven who had the attention span of three year olds who, as a result of using the video became involved for lengths of time ten times greater than before. This should not be surprising. Medical evidence indicates that vision is the essential component in initiating movement sequences. Moreover, the visual sense is the most efficient of the senses in terms of handling complex sequences of information in the shortest time.

What I have indicated here is only a small portion of what I have already accomplished and hope to accomplish with this tool. I believe it opens the door to a new set of expectations in learning, as it increases the self-sufficiency of the student being taught by stimulating insight in place of rote work.**

I welcome any interested teachers to contact me to arrange a demonstration of my equipment and video materials I have edited, and to discuss possibilities of its use.

**A 40 page essay on this subject, *A Point of View of Violin Teaching: toward the creation of a method of methods*, by Burton Kaplan, is available from Perception Development Techniques, 865 West End Avenue, New York, N. Y. 10025 (\$1.50 plus post. and handl.) Also available is a 24 minute video film, *Brandon-Videorecorder Lessons*, which describes the progress of a problem student (15 years old) as it was influenced by using the videotape recorder.