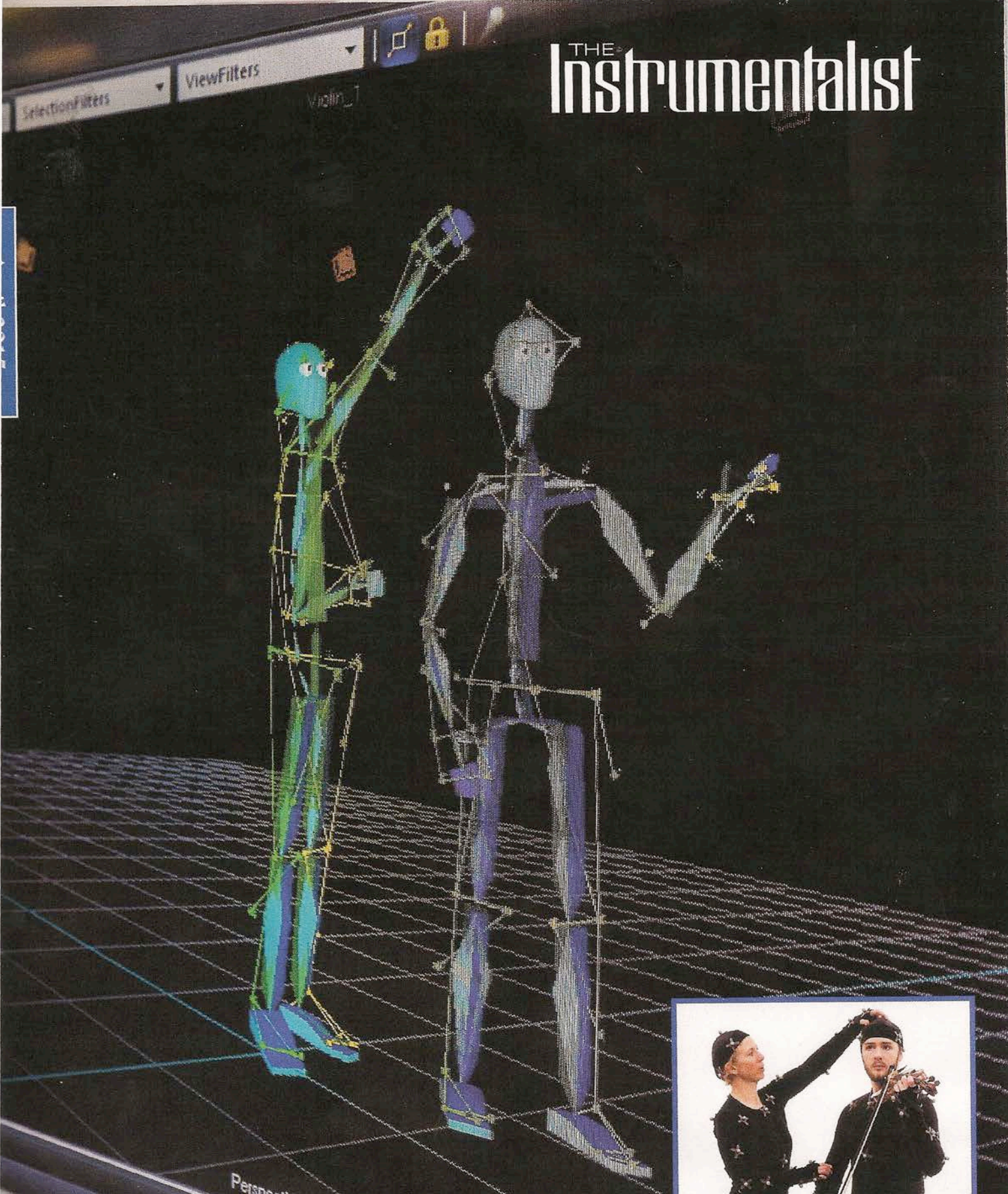


THE Instrumentalist



What Music Can Learn from Sports
Successful Marching in a Small Town
Tim Adams on Playing Great Timpani



What Music Can Learn from Sports

By **Susanna Klein**

When the men's basketball team at Virginia Commonwealth University, where I teach, made its grand Cinderella run to the Final Four in 2011, I found myself talking about basketball in many of my lessons. The process of becoming an excellent musician, like that of becoming an excellent athlete, is essentially about developing an amazing skillset plus that something extra that musicians call artistry and athletes call love of the game. In addition, mental toughness is required. During that run I followed the coverage of the team and learned more about VCU's young coach, Shaka Smart, and his process-based coaching, which included working on the skills, the strategy, and the mindset for the game. It took me back to my high school days as a swimmer. When I was on the swim team, my coach regularly showed us videos of team competition to point out any flaws in our starts, kicks,

and stroke. Giving directions was not enough; she wanted us to see to believe.

That spring, I realized that in all my years of violin teaching I had not asked my students to take on the relentless spirit common to professional and even amateur athletes. I knew from my practice that recording myself was my best learning tool, but I wanted to expand the whole toolbox of how we learn and become inspired. In sports and music, there is this juxtaposition between a realistic – and sometimes painful – look at your performance and trying to keep things upbeat at the same time. It isn't enough to be realistic, you also have to be positive. So I wrote a grant to experiment with a sports-inspired way of learning. Thanks to VCU's ALT Lab, my wish came true.

Two other string faculty members and I brainstormed how to use technology and sports psychology in music school. It was clear right away that

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instant replay was going to be a big part of our project. The grant paid for three iPads, mounting hardware, five full length mirrors, and sports psychology books and journals. However, what I originally planned and the way things ended up eight months later were very different.

Video Recording

I had set up a system with a large server that could house a great deal of video capacity, up to half-hour clips at a time. My original thought was that we would get video recordings of students, they would revel in what they see, and we would all go home happy. That wasn't at all how it was. Students rarely know how to listen or what to look for in the beginning, and they can become overwhelmed and too self-critical to glean any benefit or even be specific about what they saw. It was oppressive and not what I was hoping for.

What made students enthusiastic was keeping things light and specific. Now when I use this equipment, I use it in much smaller chunks and with narrow instructions. In lessons, we concentrate on one aspect of playing while recording, then listen back and concentrate on that same thing. I also assign students to record themselves in similar circumstances; they have to pick three specific things they hope to improve and record focused on that. Many of the videos are about 30 seconds long now, not 30 minutes.

I usually insist that students record themselves twice, so they can see the before and after. If they record themselves once, the initial reaction is negative. If they are listening for musicality, the common response is for them to say their playing wasn't nearly as musical as they thought. I have them work at it a bit and then make a second video, so they can see progress.

Seeing progress has been the most important aspect of the project, and that was a lesson learned for me. If students see the power of the change pretty quickly, then they get addicted to doing that for themselves. If students watch only their first take, they only see what's rough. They move to work on something else, video themselves again, and see a new first take, with the same negative reaction. If students don't see improvement, they tend to be resistant over time, because it can be painful to watch yourself.

Sometimes, I make students watch video with the sound off. If we are working on something

physical, such as bow grip or posture, I turn the sound off so they cannot respond to what they hear, only what they see. Sound is a dominant factor to instrumentalists, and it will distract them from the visual aspect of a video of themselves. When you really want them to focus on something, it is best to block out the other senses.

Applying Video

In the beginning, a great deal of the work I did was redirecting students' priorities. I often videoed students and then asked them to react to their

Motion Capture

As soon as VCU's motion capture lab opened, I knew I wanted to see what we could learn about our bodies when we play, so I took violinists and violists into the lab for a masterclass. It was fascinating to see what people noticed about their playing when all they could see of themselves was a stick figure. You see more when you see less. In the motion capture lab, I had a student who was playing very well, and I asked her to look at her stick figure's legs and tell me what she noticed. Her comment was that her legs didn't move at all. They didn't look like real legs but rather tree trunks because a person's legs

should move naturally while playing, at least a little. The Motion Capture Lab allowed us to see other things without the usual visual distractions, including trajectory of motions, extraneous movements, and posture. After class we went to a coffee shop next door to talk about the experience. The students brainstormed ideas for inventions they would like to use next. Among them were a mechanism that could sense how much pressure was being applied to the bow, an instrument to measure bow tilt, and various devices that would record which muscles were contracting while playing.

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playing before we watched the instant replay. They might say “I could have done more crescendo,” then we would watch the video, and I would have them tell me the first thing that popped into their minds. The first thing they might notice on video is that they were out of tune. That gives them a priority list in their practice. If tuning is the first thing that strikes a student watching himself, that will also be the first thing that strikes the audience. The aim is for students to adjust priorities on how time is spent in practice. If, in January, the bow was a little crooked and the video helped fix that, then in February the focus can be bow distribution or standing with better posture.

As the weeks went on, and students’ perception of their playing and reality came closer to matching, then the videos were used more for exploring why something was or was not happening. As an example, video is great for posture; violinists tend to lean over to one side and keep the head too far forward. It is also great for seeing your hands in space. Sometimes I will just record the bow grip as they play. Students see their hands and might notice that they are extremely stiff or that their fingers don’t move at all. Then I can point out that this is where a brittle sound or a lack of control comes from.

Sometimes I use video for side-by-side comparisons. I ask a student to video my hand, either left or right, on a passage, and then we flip and I record. We watch both and I ask what the differences are. The students spot them right away; I don’t even have to talk about it. My viola faculty colleague, Molly Sharp, came up with this idea, and it has been extremely effective. Rather than talking about it in words and then getting front of the mirror to compare, the side-by-side comparison works wonders.

Mirrors

The video teaches, but the mirror helps train. When students discover something in video, they can use the mirror to monitor themselves during practice. Mirrors require no technology; students can watch themselves to accomplish their new goals. This idea of using mirrors came from ballet lessons I took when I was young. The mirrors aren’t wall to wall, but they do reach floor to ceiling to allow students to see what the lower body is doing as well. Also, they are wide enough to accommodate both students and teachers standing side by side. Access and ease are extremely important. Mirrors have to be someplace useful, otherwise stu-

dents are forced to practice in the bathroom or will not use one at all. The mirrors are set up in large practice rooms that are also sometimes used for ensemble rehearsals, and they have been a big hit. The first couple days after they went up I saw horn players, oboists, and singers all using them.

Journals

My research in sports psychology convinced me that I wanted my students to reflect and write, but in a non-academic fashion – that is to say informal, untyped, and ungraded. I constructed a workbook journal for them that was largely inspired by Richard Kent's athletic journaling materials. Richard Kent is an athletic writing guru at the University of Maine who has been helping teams and individuals think and write about their habits, attitudes, and everything in between. The journals I came up with were music specific. The writing was more rewarding for the students than I could have imagined. Journal prompts are meant to spur discovery about their practice habits, inspirations, style of learning, and hardships in their music study. In short, they are about self-discovery, or learning without teaching. Students have three

prompts to complete between lessons: I look through them, but not closely; it is students' work, and I do not grade it. If there is something too personal in an answer, students can fold that page in half, which is a sign that they did the assigned writing but do not want it read.

Students have learned more about what makes them tick, and I am learning a great deal about them too. One student wrote that some of the best practice sessions happened after a good lesson, which made me realize that I wasn't sure what defined a good lesson for that student. I asked what constituted a good lesson, and the student replied, "It inspires me when you are really relentless and don't let me get away with anything." Every student is different, but now I knew how to inspire this one.

The first question in the journal asks students to name their best qualities as a studying musician – the habits or attitudes that others would admire. If one of them writes, "I am a hard worker" or "I am relentless in my determination," that is something we can draw upon to overcome challenges. If a student writes, "I am creative," then if

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photo by Stephen Clatterbuck

they are unmotivated to practice or having difficulty staying positive, I can take advantage of that and make practice more creative, because repetition is likely to bring them further down or bore them. We work on plans to play something new or try something in an entirely different way, such as playing music backward or only playing every third note.

One writing prompt asked students to describe a highlight of their time in music that was not an audition. That one was meaningful to many students, and a number of them mentioned playing for young children.

Another prompt asks students to make a list of things that affect the quality of their practice, with separate columns for positive and negative influences. Ideas like this are meant for students to understand how life influences their work. For students to see in writing what works and doesn't work for them is simple and powerful and requires no input from me. Every once in a while, I can make a student feel more confident in his instincts. I had a student say, "I have a hard time practicing at home around my roommates because I feel like they are very judgemental." My suggestion was to practice at school when possible. It seems simple, but he needed to know that his feelings were normal and that



photo by Victoria Carril

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the solution, which I am sure he had already thought about, was relatively easy to achieve.

Many students coming into music school struggle with insecurities but believe that their classmates are extremely talented and have everything figured out. The truth is that everybody is complex and everybody struggles. The writing prompts themselves can attest to the normalcy of their experience and helps them understand that everybody has psychological hurdles, and hard work is hard work for everybody. The shared experience of it can be quite comforting. That wasn't necessarily what I had set out to do, but I have noticed in retrospect that students feel more comfortable admitting their problems and seeking help.

I ask students to mark in their journals any problems they are having with their playing in a given week. This could be back pain, being uncomfortable at the frog, or even specific measure numbers. Of course, I will also define what they are having trouble with, but students' notes are often where we start; I want them to understand that they are in charge of noticing what their problems are and that my job is to be a coach. The journals have helped me be a better coach, with deeper understanding of my students as artists and people. Coach Smart has team mantras but also individual focus points for each player. During one big VCU game, the network showed the VCU locker room, which had printed buzzwords for each player to remember. Dubbed in the press as "relentlessly positive," Smart both coaches and mentors his players.

Assessment and Large Ensembles

I have been looking to apply some of the grant work to ensembles and have been asking my colleagues how technology and writing might fit into ensemble classes. I am inspired by the many ideas out there. At a recent conducting workshop here, I gave a demo lecture on intonation, and conversation turned toward using technology in an ensemble setting. One teacher hooked up a microphone to the bridge of one student's instrument to test scales. The entire ensemble played the scales together, and the full ensemble is audible on the recording, but the pitches of the student who was miked are loud and clear. The teacher graded based on that. Each student had the security and tonality of the group to hang on to, but they were being individually assessed.

Much of the difficulty with assessment in an ensemble setting is that it is a time drain, either costing rehearsal time or adding to a teacher's out-of-class time, especially if students submit audio or video recordings. Our discussion centered on using technology in a way that is quick and seamless, without creating a lot of extra work for either teachers or students.

My encouragement to the teachers was to consider assignments that were not assessed but only there for deeper learning. There are projects that can be done to fill in gaps, including journaling. Part of the group could have a sectional, and the rest of the ensemble could write in journals during that time. If students have an assignment to record videos twice and write about the experience, don't have them send in the video, just grade pass/fail on whether they did the writing. Some students might just write without videotaping themselves, but for the one or two who do that, it's not worth the effort to have them prove it when you're just looking for them to talk about what they learned. If a student fakes that whole experience, it is their loss.

The aim should be to find mechanisms for students to do things on their own without the time cost of that work falling entirely on the teacher. Ideally, it is just a matter of using technology in such a way that makes it easy while managing students' expectations along the way. Adding technology shouldn't make more work, it should make things more efficient. The whole project has been about that in a way: less active teaching but more intense learning for both student and teacher. □

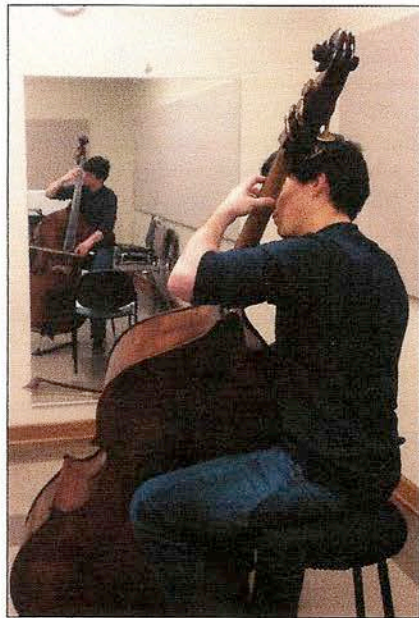


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