

THE ART AND SCIENCE OF RECORDING AT THE CHICAGO CHILDREN'S CHOIR ACADEMY: SOME NOTES ON DMT CLASSROOM PRACTICE

by

NICK JAFFE

I spent two years teaching full-time at the Choir Academy, integrating DMT use into the classroom. Though I've taught differently in other situations, the essential features of my "classroom" and what students do in it are the same.

I tried to create a context that was very similar to a working recording studio, with some adaptations to the way kids work. A digital audio workstation set up for live recording was the centerpiece of the studio. A number of computers equipped with multiple headphones were set up around the room. The room contained a drum kit, an upright piano, a Rhodes electric piano, several electric and acoustic guitars, an electric bass, a midi keyboard, percussion instruments, amplifiers etc. All were stored so as to be immediately accessible to students. A central carpeted space with a movable whiteboard easel also served as a seating area for discussions and direct teaching. The room was lit as warmly as possible with standing incandescent lamps. The walls were decorated with framed student art. Students decorated the door to the room with the name of the studio and decorated some of the storage cabinets. Microphones, cables, mic stands all had their prescribed storage locations that were clearly labeled. All records, track sheets, working notes, lyrics etc. were stored in a clearly labeled file cabinet maintained by students. A stack of clipboards and paper was stored by the door.

The central workstation was used for most of the live recording of instruments and vocals. Sequencing, beat-making, sample editing, video editing (we did some video work as well in the second year) and project-related visual art and word processing were all done on the PC's located around the room.

COMPUTERS AS MUSIC-MAKING TOOLS

Computers and software have no inherent advantage over guitars, pianos, or table tops as music-making tools. They do allow for three particular processes that make them particularly powerful as music-teaching and music-making tools for students with no, or little, formal musical experience.

The first is that they allow complex tasks of composition and performance to be broken down into very small, harmonically and temporally discrete units. Most students have very complex compositional ideas (even if they are initially imitative) based on the music that they have experienced as listeners. Often their ability to realize these ideas in "real time" as performers lags far behind their ability to hear the ideas in their head. Computers and software allow students individually and in groups to build up these ideas in small pieces outside of real time and then play them back as a whole.

The second process that computers make possible is the ability to experiment with melodic, harmonic and rhythmic permutations in "near real time." A student with no per-



NICK JAFFE IS A TEACHING ARTIST, WRITER, MUSICIAN, AUDIO ENGINEER, A CERTIFIED K-8 TEACHER AND THE CHIEF EDITOR OF THE TEACHING ARTIST JOURNAL. AS A TEACHING ARTIST NICK'S FOCUS HAS BEEN THE DEVELOPMENT OF STUDENT-RUN RECORDING STUDIOS IN ELEMENTARY SCHOOLS. HE RECEIVED A BA IN HISTORY FROM YALE UNIVERSITY AND AN MS IN EDUCATION AND SOCIAL POLICY FROM NORTHWESTERN UNIVERSITY. NICK IS THE GUITARIST FOR THE BAND SOUL PEOPLE AND HAS PERFORMED WITH A WIDE VARIETY OF ARTISTS INCLUDING JAGUAR WRIGHT, RENEE NEUFVILLE (ZHANÉ, ROY HARGROVE), AND GRAMMY NOMINEE SYLEENA JOHNSON. NICK WELCOMES RESPONSES VIA E-MAIL AT NICNITE@AOL.COM.

formance abilities can use sequencing software to create and modify a melodic or rhythmic motif as it plays back. This is critical in bridging the experience of composition and performance. Most people without musical training (there are exceptions) find it very difficult to experiment in a free-flowing manner with harmony, melody and rhythm without rapid feedback as they make modifications. The computer solves this problem.

The third process that computers make possible is that of short and long distance, near-instantaneous communication of musical ideas. This can take the form of collaboration between students in different classes in the same school, of online collaborations between students in different parts of the world, both in near real time and over time, and of the mass distribution of student work over the Internet. The potential field of collaborators and the audience for student work is now almost unimaginably vast. This sense of possibility impacts both the students' sense of their work and the reality of that work.

In spite of what computers offer, music is still music. Weak, formulaic, incoherent, poorly performed music can't be improved by digital gear any more than powerful, innovative, well-performed music can be corrupted by it. Computers can't teach a student scales, interpretation, music history or theory any more than they can teach a student physics. The tools are just tools.

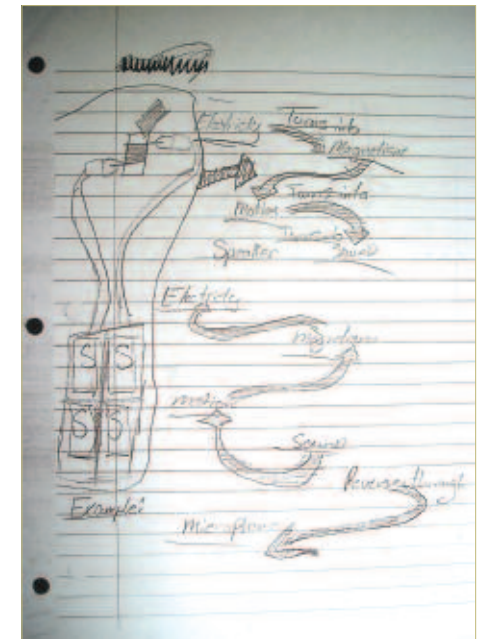
OBSERVATIONS IN THE DMT RECORDING STUDIO

I saw each group of 15 kids (grades 5-8) once a week for 50 minutes. All grades including fourth would also work on independent projects during lunch and Study Hall. In a typical Recording Class, the students would enter and grab some clipboards and paper, and then we would listen to a short musical selection. This might be student work from another class, something a student brought in, or something I selected. We would briefly discuss the work, sometimes to explore a particular musical or creative issue, sometimes from an engineering standpoint, sometimes both. Students would take notes as they thought necessary.

After this introduction, I would teach for about ten minutes on a specific technical or scientific topic. Topics included basic acoustics including wave mechanics, audio engineering practice, theoretical issues in digital technology etc. We would then usually have a brief discussion on the topic, and students would take notes for later reference in the studio.

The remainder of the class was devoted to that particular class's current project or projects. Each class would develop its own project, sometimes breaking into smaller groups to pursue simultaneous projects. Because these varied greatly in form and content, and also because different classes and ages had different work styles, this part of the class also varied greatly. On any given day a visitor might observe the following during this "production" segment of the class:

- Students having a group discussion about what their project should be. They might discuss themes from their academic classes that they wished to pursue. They might argue over what styles they wished to investigate. They might read various poems or rap lyrics that various students had written to decide which might be a good starting point for a song.
- Students programming beats, recording sounds to make samples, and "jamming" in an improvisational manner to develop musical ideas and motifs for a project. Often projects began with a live or sequenced beat. Often more than one beat was proposed. Sometimes beats were combined to make different "parts" of a work; other times students decided that one was more compelling for their project than the other. It might get pretty noisy during such a developmental phase, but students had a rather shocking (to me) ability to work effectively and listen well amid the cacophony in this open room. Sometimes the spontaneous "cross talk" between activities resulted in great musical leaps. A kid messing around with a piano part might hear a sequenced beat being played back across the room and immediately "lock in" with it musically. Optimally though, it would have been nice for students to have the



Seventh grader Keith Redmond's casual notes from a discussion about microphones and speakers. The diagram is of the student's own devising and illustrates the relationship between sound, mechanical motion, magnetism, and electricity in speakers and dynamic microphones. The student's point is that both devices operate on the same principle but in reverse with respect to each other.

- option to work in both common as well as more isolated spaces.
- Students recording live parts as a group. One might see a group of "engineers" clustered around the workstation, or a "producer" directing a drummer, piano player and bassist in recording basic tracks for a song. One might see a single vocalist repeating take after take of a vocal hook while a student "producer" coached them to "get it really tight." Other students might be working quietly at the computers during such sessions, completing art for CD covers, maintaining the studio website, working on beats and lyrics for future projects, maintaining studio records etc. Because there was no separate tracking room, students would have to be completely quiet during takes. This was often a source of friction between students, but a really good exercise in self-organization.



A fifth grade class at Choir Academy posing in their in-school studio CA Sounds. This particular group was responsible for some of the most outrageous and musically innovative music, but also very carefully crafted recordings.

- Students jamming and improvising on instruments (as well as vocally), sometimes with my participation. Students would play instruments that they had some training with and ones that were unfamiliar. Many great song ideas and completed works came out of such jam sessions. They were often the solution when a class hit a creative impasse.

During lunch and Study Hall (one hour each day), the studio was usually open for additional student projects. These ranged from solo projects to work by very large groups. Students would schedule session hours on a first-come-first-served basis. Other students would spontaneously volunteer to help engineer on such sessions. Much of the strongest work came out of these sessions. The studio was often a bit mobbed at these times. There was a great deal of cross-grade collaboration on these projects. Any time I walked through the hallways, I was approached by students wanting to schedule time for a project or wanting to discuss their plans and ideas. This was a very exciting and gratifying experience.

Various groups of students, often randomly self-selected, would also do live “remote” recording of concerts by the student choirs, percussion ensembles and visiting performers. Often they would do much of the set up and post-production on their own with minimal supervision.

On several occasions I organized 7th graders to teach basic acoustics and audio engineering to 4th graders. They designed very interesting activity-based lessons for the 4th graders and executed them with shocking competence. It was striking that many of the best student-teachers were kids who were quite withdrawn and even apathetic in class. As teachers, they were very intense and rigorous about learning their material. Often their ability to engage their students far exceeded mine. I wish we’d had more time to regularize this practice.

ROLE OF THE TEACHER IN THE DMT STUDIO

As I mentioned above, I did do some direct teaching of scientific, technical and musical subjects. I also led discussions about technical and creative issues. But during the bulk of each class I tried to withdraw a bit from the work flow and let the kids “go at it.” I might work individually with kids who were stumped on particularly tasks or needed assistance with a new skill. This might mean helping a student compose a poem or lyrics, showing a kid how to play a bass line, or showing a kid how to route signals in the workstation. Sometimes I’d help with “work flow” by suggesting that groups of kids reassess the “big picture” and plan their next move, even if it was a very simple one. Sometimes as simple a question as “What exactly are you trying to do?” was

IT WAS STRIKING THAT MANY OF THE BEST STUDENT-TEACHERS WERE KIDS WHO WERE QUITE WITHDRAWN AND EVEN APATHETIC IN CLASS.

enough to help a group of students get moving on their project.

My role was also one of creative “provocateur” and sometimes critic. I did not hide my opinions, but I did choose carefully when to make them known (hopefully never before an idea had been somewhat developed by the students). I also took great pains to create an atmosphere where my critical authority was as “unprivileged” as possible—of course I’m not all that good at getting kids to obey me in any case! Nevertheless, the teacher’s automatic intellectual and creative authority is inevitable and can certainly sometimes be useful; however, I tried to reinforce the idea that the final creative decisions were in the hands of the artists and engineers, the students, and that my opinion was one of many which could be rejected—and very often it was. I figured that if more than 25% of the work sounded and/or looked like I would have expected it to, something was amiss—the kids were doing my work, not theirs.

I also made a practice of leaving the room on a regular basis, sometimes for a few moments, sometimes for half an hour or more. I referred to this as “taking a break.” I would often leave if the kids were working beautifully as group—a professional studio session in full swing. I’d hang out in the hall and kids might come out to ask a technical question, but once I’d answer it they’d say, “You can stay out here, we’ll figure it out.” Sometimes I’d leave when things weren’t going well. Kids might be arguing senselessly about creative or personal differences. Most of the time things sorted out when I left and deprived them of



Fifth grade women engineers at work at Choir Academy. The loose vibe in the studio seemed to encourage students to shatter gender stereotypes of all kinds.

a “parental” audience. Of course, one has to be a bit cautious in such circumstances (I always remained nearby and with a view into the room), as there’s always a risk of things getting hurtful to the point that more damage is being done than good. But for the most part my absence tended to help the kids refocus on the work at hand. I think this experience of working independently was very important in helping the students learn both the tangible skills and the intangible competencies involved in real artistic and technical collaboration. Leaving a room of fifteen 5th graders to work on their own and coming back thirty minutes later to hear a beautifully, professionally recorded original work was a hugely gratifying confirmation for both the students and for me that they were not only learning but creating something original. The atmosphere surrounding such independent work was electrifying, and I believe it was responsible for much of the creative risk-taking and deep learning that students experienced.

ACADEMIC AND SOCIAL-EMOTIONAL BENEFITS OF THE DMT STUDIO

The relatively flexible atmosphere in our class seemed to be a great help to many students who had difficulties in their academic classes. The emphasis in our studio was not on grades, nor even on the student as a “kid” with more or less “problems,” but on the work. As a result, kids seemed more open to trying things

that they found intimidating. The results were forever surprising to me and to the students. Self-described “bookish” kids would be more likely to sing or rap. Kids who considered themselves non-technical were often drawn to the engineering side of our work. The majority of competent engineers and technical specialists were female students. Kids who had reading and writing difficulties could be encouraged to write and they’d do so successfully. Kids who had a terrible time collaborating would eventually end up successfully directing large, complex productions, deeply collaborating with “enemies.” The more it was about the music, the less it seemed to matter who did what. Again, more time and smaller groups would have enabled me and the students to capitalize more fully on this aspect of the context.

During the second year I helped students set up a simple website to host their music and visual art. As projects were completed, we posted them on the site, and students would put up flyers of their own design announcing to the school that a new song was available. Twice a year we would also issue a compilation CD free to the entire school, since just about every kid had played an active role in one or more of the works on the CD. Cover design, packaging and production of the CD was handled by the students.

There were some very interesting projects that integrated the students’ academic studies with the work they were doing in Recording Class. Typical of these projects was *The Civil Rights CD*. Fifth grade students had written a series of poems as part of their study of the history of the Civil Rights Movement. They spontaneously decided they wanted to set this poetry to music and put out a CD anthology. The results were really spectacular. I was fortunate to have had the chance to collaborate with a number of really capable classroom teachers who helped with other such integrated projects. I also tried whenever possible to relate my teaching in the studio to material the kids were working on in class, particularly in the sciences and in Language Arts. I would have liked to see a lot more such collaboration and integration, but a variety of problems at the school (grossly overworked teachers, very restrictive scheduling practices etc.)

made such projects more difficult than they might have been. I was also not always effective in convincing students of the potential of such projects; the musical results of projects that I initiated or assigned tended to be less interesting than student-initiated work. Nevertheless, those projects that were completed showed just how natural a fit there was between pretty much all of the academic subjects and our recording studio work.

I’ve done a lot of informal interviews with students about various things. One question I asked was why they liked Recording class. I was surprised by the similarity in the answers I got from students of very different ages and dispositions. “We have freedom in here,” one said, and when I pushed for a more detailed answer, she added, “We can be ourselves and do our work at the same time.” This feeling was echoed by many others. I think the variety, complexity and originality of their work is evidence that speaks to the importance of that “freedom.” ¶

Music from CA Sounds and other student studios can be heard at: <http://nickjaffe.com/music-group-15.html>.



Original cover design by Choir Academy eighth grader Keith Redmond for a student music compilation CD. CD’s of completed student projects were distributed to all students free. While students had strong opinions about songs they liked and disliked, most listened to these CD’s endlessly and knew all the songs. Such CD’s seemed to contribute to a shared musical culture among students that at least partly transcended genre and identity and led to very interesting musical collaborations.