

IDENTIFYING SUCCESSFUL DICTATION STRATEGIES

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As a teacher of musical skills at various levels, I rely heavily on dictation to evaluate students' ability to correlate musical sound with its notation. I often find myself passing on hoary advice about how to take dictation efficiently. "Listen first and memorize before you write." "Get the rhythm down so you'll have something to hang pitches on." "Concentrate on structural pitches and fill in the rest later." But even as I recite these platitudes, I see some students doing quite well following none of my suggestions and, when pressed, admit that I sometime ignore my own advice when taking dictation. While I present these as suggestions and not dogma, I stress that individuals will eventually find techniques that work for themselves, and that many students *do* look to me for *a* method, particularly in the early stages of study. I question whether my advice is producing successful dictation-takers in the most efficient way.

I decided to conduct observations of skilled musicians taking dictation to try to determine which strategies were most effective. Most of the research experiments in this area have been narrowly focused to yield reliable and replicable data. I might have set up an experiment in which, say, a 3-note melody was provided for subjects who would then be asked to write down the fourth note heard and how they determined it. But I had in mind something broader and more immediately applicable to my teaching. Drawing on an ethnographic research paradigm specifically that is detailed in *Naturalistic Inquiry* by Lincoln and Guba,¹ I set in motion a research experiment to learn more about effective dictation strategies.

THE EXPERIMENT

An Indiana University research grant paid five graduate theory majors to observe 25 paid subjects taking dictation. Early on we decided to limit the study to melodic dictation and to choose subjects who were as good at dictation as we could find, avoiding those, however, with absolute pitch.² The subject listened to tapes of typical "dictation class" melodies (4 to 8 measures long, performed on piano, with key and meter established for all

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but one melody), and they responded in notation as they would in class. We observed what took place, changing the experiment somewhat when our discussions suggested we could learn more by adding a melody and reordering the three original ones. The four melodies are presented here as Figure 1.

Figure 1. Four dictation melodies.

a. "Added" melody. Barlines and bracketed portions given. Key and meter established first.



b. Barlines and bracketed portions given. Key and meter established first.



c. Barlines and bracketed portions given. Key and meter established first.



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d. Clef sign and first note only given. (No key or meter signature or barlines given.) First note only established.



We collected data in three forms:

1. Colored-pen dictation. The subjects used different-colored pens for each successive hearing of each melody. Their notations thus document their progress toward correct notation.

2. Tapes of the experiments. The experiments were done one-on-one: subject and researcher. Each subject was encouraged by the researcher to sing, tap, whistle, and comment on the process as it took place. A tape recorder ran throughout the experiment.

3. Researchers' observations. The researchers kept notes of their observations as the subjects worked, interacted with the subjects, and attempted to elicit comments about strategies used to solve particular dictation problems as they arose. Clearly, the researchers were not dispassionate data-collectors. Rather, they involved themselves in the situation, asked probing questions, trusted their intuitions, and drew conclusions based more on their musical sensitivity than on hard numerical facts.

Some aspects of the experiment did not go as we had expected:

1. Finding people without absolute pitch who also admitted to being "good at dictation" turned out to be harder than anticipated. The subjects' abilities ended up ranging from fairly good to excellent. A few subjects turned out to have at least some degree of absolute pitch, although they did not so classify themselves.

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2. Dictation, while it may be the best tool we have for evaluating ear training progress, is a unique skill, one that some excellent musicians do not maintain without frequent specific dictation practice. More than half of the subjects of this study apologized for "being rusty" at dictation. I had expected that professional musicians and music students, involved daily in active music performance and listening, would continue to improve at dictation after finishing formal skills training. I was wrong. I have come to the unsettling realization that, for some fine performers and teachers (including theory teachers!), dictation ability seems to have little relation to their successful musical lives.

3. It was difficult to get many of the subjects to talk as they worked or even to sing or tap aloud. Some had learned to internalize melodies so well that it bothered them to sing. Others were so conditioned from ear training courses to working in silence that they could not do otherwise. Of the three observation methods, the tapes of the experiments proved the least informative.

4. The colored-pen aspect of the experiment worked well, although some subjects accustomed to writing in pencil and erasing felt uncomfortable using pens.

CONCLUSIONS

Conclusions drawn from such a limited study must be tentative, and generalizing about them is risky. Having studied, however, the 25 hours of tapes, the colored-pen dictations, and the researchers' insightful observations, I have come to conclusions that, while not astounding, will certainly inform my teaching. Following are some of these conclusions and their implications for my future teaching.

1. Rhythm. Rhythmic understanding is absolutely imperative in dictation. This is nothing new, but I was struck by the extent to which subjects comfortable with rhythmic notation, those able to place notes easily in a metric framework, succeed in comparison with those who identify pitches quite easily but do not always know where to put them. One subject's comment sums up the opinions of many: "I don't like to write things down unless I know where they go."

Methods for "getting the rhythm" differed. Some tapped or conducted. Some made "metric frameworks" (slashes or dots above the staff).

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Some notated the entire rhythm first on or above the staff before dealing with pitch at all (not the most successful method). Some moved the pen across the blank measures in time with the music, jotting occasional noteheads or rests in their proper spots.

In my own teaching I plan to increase emphasis on rhythm, and stress conducting while listening, although the experiment indicated that conducting must become second-nature to be valuable; for one subject, it was an end in itself that actually hindered the dictation process. I will use a metric framework, at least for beginning skills students, and insist on the "moving pencil" at all levels. Subjects who stopped to work out a problem spot did less well than those who usually kept the pen moving in time, working on several portions of the melody simultaneously.

2. Scale degree and interval recognition. The four melodies used in the experiment were all tonal; some chromaticism was included and one melody briefly threatened to spin off into atonality. Clearly, subjects who thought in terms of scale degrees (whether numbers or movable-do solfege or scale degree names such as "supertonic" or "submediant") succeeded far better than those whose main strategy was interval recognition. Several of the most successful subjects held tonic and dominant pitches in their heads as "drones" throughout the repeated hearings and even during the time between them, as their comments and/or singing made clear. Many, however, also used intervals to check or validate a scale-degree decision, particularly at melodic leaps and in the one atonal section. Not all could switch easily from tonal to intervallic thinking; the best were fluent with both approaches.

In my teaching I will continue to push scale-degree recognition at every opportunity, but will not ignore interval work as well. The following, from one of the best subjects working on measure 1 of melody c, is typical of the most successful dictation-takers:

Researcher: Right! So you tonicized that E-flat for a second . . . yeah?

Subject: No, no, no, no! I didn't know what this note was when it jumped down to it, and I stopped the note and thought . . . I heard it going to 5 so I knew it was . . . so I knew where this was just from the pitch itself in the key rather than hearing it as a fifth down from B-flat.

3. Harmonic function. Fewer subjects reacted to implied harmonies in the melodies than I had expected. Graduate theory students were more likely than others to recognize the arpeggiated French augmented sixth in measure 3 of melody c, for example. But even some of these theory majors

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became aware of harmonic implications only after solving the dictation by other means.

In my classes I will, however, continue to encourage considering harmonic function in melodic dictation; at the least it reinforces work in harmonic dictation and other aspects of the theory program.

4. Patterns. The best dictation subjects had extensive musical backgrounds. Some had theory training at an early age, and most had lots of performing experience, sometimes on several instruments. They capitalized on their familiarity with the melodic conventions of Western music. The following quotations express what for many subjects went unsaid:

Now I'm creating a completion here, leading from here to here, in my head . . . expecting that's what it's going to do . . .

These are such cliches. You know it's just like, how many times you got melodies like this. You hear it, you just know what it is. You barely have to think about it.

[Working on melody d] . . . if that isn't Schoenberg [sings opening of *Fourth String Quartet*] it's awfully close!

How can I apply this insight in my teaching? I can not alter the musical past of my 18-year-old freshmen. But at least I can be aware that what are cliches for me may not be cliches for many of my students. I should, therefore, introduce them to common musical patterns of pitch, rhythm, and harmony, presenting them as conventions. I can point out similarities with music previously studied. I can push students to verbalize about their musical expectations by stopping the music at odd spots and asking "What comes next?" In the study of harmonic progressions in particular, I can focus on probabilities: "Given this bass line, which chords can fit, which are likely or just possible, and which are impossible in the style?"

5. Memory. While the ability to memorize a melody quickly is a tremendous asset in dictation, those subjects who "listened first to make a mental tape to be played back at will" did far less well than those who began writing during the first hearing. In my teaching, I plan to drill on extending memory, but I will not insist on the pencils-down first hearing of longer

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melodies. Instead, I will urge students to write *something*, preferably very lightly. As one subject put it, "... if I write that down, even if I'm not sure, it's something I can go on from later ... "

6. Holistic approach. Finally, the experiments show that the best dictation-takers have a whole box of tools to work with, tools that work synergistically toward the same end. One of the best subjects mentioned scale degrees (both numbers and solfege syllables), intervals, implied harmonies, leading tones, expected resolution, and parallel phrase structure all during the solution of one four-measure melody. This subject is a doctoral theory student and, while I can scarcely expect such sophistication from freshmen, I can constantly demonstrate in skills courses that written theory is not the universe apart it seems to students who get separate grades from different instructors. Dictation should be a holistic procedure in which hearing and understanding come together.

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NOTES

¹Yvonna S. Lincoln and Egon G. Guba, *Naturalistic Inquiry* (Beverly Hills: Sage Publications, 1985). Lincoln and Guba methodically present this research paradigm as an attractive alternative to rationalistic inquiry. They carefully detail the steps to include in a naturalistic research project to insure its "trustworthiness." They replace rationalistic criteria of validity, reliability, and objectivity with credibility, transferability, dependability, and confirmability; a long list of experimental techniques is given to establish trustworthiness.

My experience is far from a model of naturalistic inquiry. It borrows many of the specific techniques, and I believe that it maintains the spirit of that paradigm. The following is taken from my written presentation to the five researchers as I introduced the idea of the dictation experiment to them.

The implications of a naturalist set of beliefs for research are outlined in pages 39 through 44 (of *Naturalistic Inquiry*). Several points are summarized here; in parentheses are potential ramifications of these points for the current dictation project.

1. Naturalistic research is done in its natural setting. (Melodic dictation-taking is a rather artificial process in the first place. At least subjects can be allowed to respond in musical notation rather than at a computer terminal. And they can hear relatively long spans of melody instead of the 2- to 4-pitch fragments often studied by conventional methods.)
2. Data gathering and interpreting are done better by humans than by machines. (We will gather data with our individual biases, strengths, and shortcomings influencing what we regard as important.)
3. Intuitive knowledge is valued at least as highly as knowledge expressible in language or numbers. (We will not merely record data but will pursue hunches and encourage responses which we feel to be important or useful.)
4. Qualitative methods are at least as valuable as quantitative. (Relatively little of our data will be numerical.)
5. Sampling is not random but purposeful. (We will choose subjects carefully. We do not wish to study the average musician but rather the expert—but without perfect pitch, I believe.)

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6. Data-analysis is inductive rather than deductive, retaining the rich multiplicity of the data, exposing mutually-influencing factors. (We will not try to boil experience down to a few dictation-taking "rules.")

7. Theory arises from the data itself; the research is not conducted to prove or disprove a hypothesis. (How do experts take melodic dictation? We will observe and find out.)

8. Even the design of the research project itself emerges from the data and changes as it goes forward. (We do, however, have budget and time constraints; within these there is considerable flexibility.)

9. Human subjects have a voice in interpreting data about themselves. (We will constantly be urging them to confirm or disconfirm what we think they are doing.)

10. The research findings are often presented in a lengthy, inclusive "case study" format rather than in a summary which "averages away" some of the interesting aspects of the data. (I will prepare the case study with input from all involved.)

11. Generalization is avoided.

12. Applications to other settings are necessarily tentative.

13. Boundaries of the inquiry emerge as research progresses. Width of focus is indeterminate. (We will continue until time and money run out.)

²The 25 subjects included a professional symphony oboist and teacher, two Indiana University faculty members (a performer and a conductor), ten doctoral students (of whom five were theory majors), five masters students, six undergraduates at or near the end of the ear training course sequence, and one freshman with an exceptionally full and varied musical history. Musical backgrounds were quite diverse, ranging from the freshman with years of formal music schooling to a professional performer/teacher with vast performance experience but virtually no formal theory training. Instrumentalists, vocalists, composers, and conductors were included. Previous skills training included a variety of systems and techniques.