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The Nature of Expertise: Narrative Descriptions of 19 Common Elements Observed in the Lessons of Three Renowned Artist-Teachers

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ABSTRACT

We examined approximately 25 hours of video recordings of private lessons taught by three internationally recognized artist-teachers: the oboist Richard Killmer, the violist Donald McInnes, and the pianist Nelita True. By creating detailed narrative descriptions of the lessons observed, we sought to determine whether there were elements of instruction that appeared in the teaching of all three pedagogues. We identified 19 such elements, which we organized in three broad categories: Goals and Expectations, Effecting Change, and Conveying Information. All of the 19 elements, which we describe in detail, were prominent features in the lessons taught by all three teachers.

INTRODUCTION

Analysis of expert teaching has long been a part of professional education at all levels of instruction, but, even in light of seemingly endless discussions of the definitions and indicators of good teaching, there remains considerable debate about what makes an expert teacher. Despite the remarkable consistency across all disciplines with regard to broadly framed descriptions of effective teaching and its attributes, identifying precisely what expert teachers actually do to elicit positive changes in their students moment to moment remains an unsolved problem for aspiring novices, teacher educators, and other professionals involved in teacher assessment. Perhaps especially in music, in which the interactions between teachers and students differ markedly from conventional classroom instruction, there is a paucity of literature that adequately explains the complexities of expert teaching in context.

Music teaching has a long and rich history, and much has been written about notable pedagogues of the past, both in the history of Western music and in the histories of other cultures (Shehan Campbell, 1991), but surprisingly little of what has been written provides information precise enough to be useful in learning to become an excellent teacher. How do experts turn poor musicians into good ones? How do they turn good musicians into great ones? Answers to these questions encompass all of the things that teachers do: how they explain, how they demonstrate, how they ask questions, how they respond to student performance, and, perhaps most importantly, what they *have students do*. The difficulties in defining expert behavior precisely are not unique to music teaching, of course; the same challenges confront those who attempt to capture the nature of expertise in every discipline.

Perhaps not surprisingly, observers at all levels of experience and expertise are highly reliable in identifying excellent teaching when they see it (Duke, 1987, 2005; Madsen & Geringer, 1989; Madsen *et al.*, 1992; Schmidt, 1992; Siebenaler, 1997), and the many books written about teaching express similar views about the characteristics of excellent instruction. But the majority of the non-research literature, rather than explaining the process of effecting behavior change in learners, comprise primarily descriptions of instructional materials, music repertoire, performance practice, and the physical aspects of music performance (e.g., tone production).

This is in contrast to the foci of published research in music education, in which teaching has been analyzed either from the perspective of detailed descriptions of specific aspects of teacher behavior—instructions, demonstrations, and feedback, for example (Davis, 1998; Duke & Blackman, 1991; Duke & Henninger, 2002; Dunn, 1997; Gillespie, 1991; Goolsby, 1996; Hendel, 1995; Kostka, 1984; Kuhn, 1975; Madsen & Alley, 1979; Madsen & Geringer, 1989; Moore, 1976; Moore & Bonney, 1987; Price, 1983; Sims, 1986; Taebel, 1990; Wagner & Strul, 1979; Yarbrough, 1975; Yarbrough & Price, 1981, 1989)—or from the perspective of broad, narrative descriptions of teaching or the characteristics of teachers (Creech & Hallam, 2003; Gholson, 1998; Sand, 2000; Teachout, 2001; Yarbrough, 2002).

Although systematic observation has obtained reliable results concerning specific aspects of teacher behavior (Abeles, 1975; Cavitt, 2003; Colpritt, 2000; Derby, 2001; Duke, 1999; Goolsby, 1996, 1997; Hendel, 1995; Price, 1983; Siebenaler, 1997; Standley & Madsen, 1991; Yarbrough & Madsen, 1998; Yarbrough & Price, 1989; Younger, 1998), assembling a precise view of the *process* of music performance instruction, one that may serve not only as a tool for evaluation but as a source of meaningful prescriptive information as well, is an ongoing challenge (Duke, 1994, 2000, 2005; Duke & Madsen, 1991).

The purpose of the present study was to identify common elements in the teaching of expert artist-teachers in music. We began with no systematized observation structure; we simply watched many hours of video recordings of private lessons, noting elements of instruction that elicited changes in student performance, and classifying the behav-

iors of expert teachers that may define the nature of their expertise. We then selected videotaped excerpts that illustrate each of the elements as they appeared in the teaching of our three subjects.

METHOD

We observed approximately 25 hours of private lessons taught by three artist-teachers. The three subjects of the study—the pianist Nelita True, the violist Donald McInnes, and the oboist Richard Killmer—were recipients of the 2002-2003 Distinguished Teaching Award presented by the Center for Music Learning at The University of Texas at Austin. Recipients of the award participate in residencies on the Austin campus and, as part of their agreement, are videotaped teaching on their home campuses for a period of one week.

The second author of this investigation recorded 30 hours of private lesson teaching at the teachers' home institutions—12 hours from True, 10 hours from Killmer, 8 hours from McInnes—and we reviewed approximately 8-9 hours from each teacher. The students ranged in age and experience from high school students to doctoral candidates.

All three of the artist-teachers are luminaries in the world of music performance and music teaching. Professors True and Killmer teach at the Eastman School; Professor McInnes teaches at the University of Southern California. Their biographical summaries are given below.¹

Richard Killmer, Professor of Oboe at the Eastman School of Music, was the recipient of the Eisenhart Award for Excellence in Teaching. His performing career includes principal oboe positions in the St. Paul Chamber Orchestra, the Aspen Festival Orchestra, the Lake Placid Sinfonietta, the Oklahoma City Symphony, and the NORAD Band, United States Army. He is a founding member of the American Reed Trio. His academic experience includes public school teaching as Director of Orchestras, Longmont (CO) Public School System and university faculty positions at the University of Oklahoma, Oklahoma City University, Central State University, Macalester College, Hamline University, Eastman, and Yale.

Donald McInnes, Professor of Strings at the University of Southern California, holds the position formerly held by his teacher, William Primrose. Professor McInnes is renowned for his performances with major orchestras, in recitals, chamber music, and master classes, and a resident member of the Camerata Pacifica Chamber Music Ensemble. He has appeared with the New York Philharmonic, Boston Symphony, Orchestre Nationale de France, Pittsburgh Symphony, Zurich Chamber Orchestra, CBC Radio Orchestra, and Toronto Symphony, among many others. His career includes close associations with such artists as Leonard Bernstein, Yehudi Menuhin, Janos Starker, Martin Katz, Menahem Pressler, Yo-Yo Ma, and Brooks Smith. Professor McInnes is an active recording artist who can be heard on Columbia, RCA, Deutsche Grammophone, and Angel (EMI) recordings. He has introduced many new works for viola including those

commissioned for him by such composers as William Schuman, Vincent Persichetti, Paul Tufts, and Robert Suderburg. He regularly appears at leading summer music festivals in North America and abroad such as Banff, Marlboro, Gstaad, Ambler, International String Workshop, and the Music Academy of the West. His students have received the first prize at the Lionel Tertis International Viola Competition, the Friday Morning Musical Club National Competition at the Kennedy Center in Washington, DC, and the CBC National Competition in Vancouver, BC.

Nelita True, Professor of Piano at the Eastman School of Music, gave her New York debut with Juilliard Orchestra in Avery Fisher Hall. Since that time, she has appeared as soloist with Chicago, Baltimore, and National Symphony Orchestras and with orchestras throughout Europe. She has recorded over 100 works, and she gives recitals, master classes, and lectures throughout North America, Europe, Asia, South America, and Australia. She was the first American invited to be visiting professor at a conservatory in the former Soviet Union (Leningrad Conservatory). Many of her students are prizewinners in national and international piano competitions, and she has served as an adjudicator for the Gina Bachauer and William Kappell International Piano Competitions, Concours de Musique du Canada, Queen Sonja International Competition in Norway, the First China International Piano Competition, and many others. Her academic experience includes faculty positions at the Interlochen Music Camp, the University of Kansas, the University of Maryland, where she held the title, Distinguished Scholar-Teacher, and Eastman.

Our first goal in examining the video recordings was to determine whether there were elements of instruction that were common among all three teachers, confining our search to variables that related directly to *effecting positive change in students' performances*.

It is clear that the three teachers we observed are very different people. Their styles of personal interaction vary, although they are all confident, assertive, and courteous. But we were looking for attributes and behaviors that were related to the effectiveness of their teaching, with effectiveness defined by the improvements we observed in their students' playing in the moment. We should note that, to trained musicians like ourselves, the improvements in students' performances were clearly discernable at every stage of the lessons. There were virtually no instances in which a teacher identified a target and did not succeed in producing a discernible change in the target at the time it was introduced.

Our observations were collaborative, in that we discussed what we observed in the presence of the digital video recordings, all of which had been transferred to a computer hard drive for analysis and editing. We worked to develop a consensus language for articulating what appeared to us to be the most important points about the instruction

we observed. We limited our descriptions to only those elements that appeared in *nearly every lesson* taught by *all three teachers*.

RESULTS

Our analysis of the video recordings revealed 19 elements that were common to all three teachers. After extensive discussion and review, we organized the elements into three broad categories: Goals and Expectations, Effecting Change, and Conveying Information. The 19 elements are described below. We use the present tense in our descriptions to avoid cumbersome language. Note that the majority of the descriptions pertain to direct observations of events, although, in some cases, we make inferences about the teachers' thinking based on observations of their behavior in the lessons.

We then selected two video excerpts from each teacher's work to illustrate the common elements identified below. We provide video examples of all those elements that are observable in a relatively brief time span. We did not create excerpts for other elements, such as a repertoire assignment, for which no obviously observable momentary behavior is present. All excerpts are viewable on the website of the Center for Music Learning at The University of Texas at Austin: <http://cml.music.utexas.edu>.

Goals and Expectations

The repertoire assigned students is well within their technical capabilities; no student is struggling with the notes of the piece. The fact that students are performing selections from the standard repertoire that are well within their technical and musical capabilities affords more time to focus on the consistent application of excellent fundamental technique in the context of expressive music making. The challenge for the students, then, is to execute the technical and musical demands of repertoire with the utmost skill every time they engage in performance. Students come to lessons having learned the notes of the piece and having had time to make independent interpretive decisions. It is from this point—notes learned and musical ideas formulated—that work in the lesson begins.

Teachers have a clear auditory image of the piece that guides their judgments about the music. These teachers convey clear ideas about how technical demands should be executed to produce appropriate stylistic character and musical interpretation. There is little hesitation in their speech, which suggests that they have in their minds vivid auditory images of the pieces they teach. They seem to know exactly what they expect to hear when students perform. Their technical and musical judgments are based on historical and theoretical knowledge and on direct performance experience. When lessons deal with repertoire teachers have not previously encountered, they are able to guide students by generalizing knowledge from familiar pieces in a way that makes instruction as valuable as instruction with familiar repertoire.

The teachers demand a consistent standard of sound quality from their students. In every lesson, the teachers are resolute in their insistence that their students produce only high quality sounds (tone quality), the product of consistently correct fundamental technique. Irrespective of the lesson target addressed at a given moment, the teachers' attention remains focused on the quality of students' sounds. When students use faulty technique and produce sounds that are below the expected level of quality, teachers immediately identify the problems and require students to repeat the passages until correct technique and beautiful tone are demonstrated in context. The teachers are tenacious about sound quality, continuing to attack the same problems again when they are reproduced. They do not let sound problems persist in their presence.

The teachers select lesson targets (i.e., proximal performance goals) that are technically or musically important. Perhaps the most occluded aspect of the teachers' decision making is their selection of lesson targets in the moment. Their choices of targets are based not only on the achievability of goals, but also on the goals' contribution to the musical product. The teachers' choices evince a reasoning that balances feasibility with importance. More trivial issues, like intermittent, momentary errors, tend to be ignored, whereas more fundamental issues of technical execution and issues of continuity and effective expression of musical ideas are attended to immediately and are pursued assiduously.

Lesson targets are positioned at a level of difficulty that is close enough to the student's current skill level that the targets are achievable in the short term and change is audible to the student in the moment. When errors in performance require attention, teachers guide error correction successfully. They accomplish this by clearly identifying the underlying fundamental issues that are causing problems and asking students to make adjustments in their playing accordingly. Teachers skillfully limit what they ask students to do in a way that ensures students will be able to make that adjustment in the moment. Because students are able to successfully manage the changes they are asked to make, they hear improvement immediately.

The teachers clearly remember students' work in past lessons and frequently draw comparisons between present and past, pointing out both positive and negative differences. As students make progress over time, teachers are clear in pointing out the positive changes they hear in student performance. The considerable amount of time spent describing improvements in performance over weeks or months is notable for its contrast with negative feedback, which is generally pointed and brief.

Effecting Change

Pieces are performed from beginning to end; in this sense, the lessons are like performances, with instantaneous transitions into performance character; nearly all playing is judged by a high standard, "as if we are performing." The teachers create opportunities for students to practice performing by structuring lessons in ways that make the lesson performances

resemble public performances. In the case of only one teacher (True) do lessons generally begin with uninterrupted performances of prepared repertoire. In subsequent performances with Professor True and in all performances with Professors Killmer and McInnes, students are interrupted only when errors are made. When giving feedback, the teachers describe how an audience in a concert hall would perceive the students' performances, which serves to emphasize the point that every performance trial should be executed as though people were "paying to hear it," whether the performance takes place in a practice room, lesson studio, or concert hall.

In general, the course of the music directs the lesson; errors in student performance elicit stops. Students come to lessons with a command of the repertoire. Notes and rhythms, except when these have been learned incorrectly, are not topics of discussion. Teachers allow students to play through pieces or sections of pieces in their lessons until errors occur. These are dealt with the instant they occur, with the teacher immediately interrupting performance. Because errors are not permitted to occur without correction, teachers reinforce the idea that performing beautifully and accurately is the goal of every performance trial.

The teachers are tenacious in working to accomplish lesson targets, having students repeat target passages until performance is accurate (i.e., consistent with the target goal). Once a target has been identified, teachers have students repeat passages until positive changes are made and the students perform accurately. They use a variety of feedback and modeling to elicit changes and do not give up or simply tell students to "go practice." The targets they choose to work on are noticeably directed at characteristic sound production and appropriate musical interpretation, and are carefully chosen so that success is achieved.

Any flaws in fundamental technique are immediately addressed; no performance trials with incorrect technique are allowed to continue. Teachers pay careful attention to the way students execute physical movements in every performance, and flaws in technique do not go unnoticed or unmentioned. When students demonstrate a fundamental flaw, that problem is addressed with utmost priority, superseding any other previously stated performance target. Repetition of the targeted physical movement continues until the technical flaw is corrected, and the lesson resumes its course.

Lessons proceed at an intense, rapid pace. Because teachers identify targets quickly and concisely, teacher-student interactions occur frequently. This rapid alternation between episodes of teacher activity and student activity increases the students' opportunities to respond and receive feedback about their performances. Teacher activity episodes are generally very brief. Teachers state their feedback and directives succinctly and straightforwardly.

The pace of the lessons is interrupted from time to time with what seem to be "intuitively timed" breaks, during which the teachers give an extended demonstration or tell a story. The teachers seem to sense when breaks from the intense pace of the lessons are

needed. In order to allow for mental and physical relaxation, teachers depart from rapid teacher-student interactions by telling an interesting or entertaining story or by elaborating on something previously discussed. These breaks are clearly departures from the task at hand and seem to serve as brief, pleasant diversions for both the student and the teacher. Once students and teachers have had time to relax, the more intense interactions resume. When the pace changes between rapid alternation of teacher and student activity episodes and longer breaks, there is little or no transition time in getting back to the intense pace. In fact, the pacing of the lessons seems almost dichotomous. The teacher is clearly in control of the pace of the lesson.

The teachers permit students to make interpretive choices in the performance of repertoire, but only among a limited range of options that are circumscribed by the teacher; students are permitted no choices regarding technique. Teachers offer students opportunities to make limited independent choices concerning interpretive elements of performance, and do not intervene when interpretive choices are within the parameters of accepted musical convention. But when students make choices that are outside the bounds of acceptability, as defined by the teacher, the teachers lead the students to rethink their choices and select more acceptable alternatives. Some of the interpretive choices that students make are only apparent choices, in that the teachers lead the students to adopt interpretations that the teacher clearly has in mind—in these instances there is no real choice. Students are given no options regarding the technical aspects of playing the instrument, and they follow the teachers' prescriptions to the letter.

Conveying Information

Teachers make very fine discriminations about student performances; these are consistently articulated to the student, so that the student learns to make the same discriminations independently. It is clear that the teachers know precisely what they expect to see and hear from the students, which suggests that their vivid auditory images of the repertoire lead to their detecting even the smallest deviations from the images they have in mind. Teachers articulate clearly and directly what they hear, and their attention is focused primarily on tone production and musical expression (including all of the rhythmic and dynamic variables that contribute to expressive music making). This systematic feedback guides students to listen to themselves as their teacher listens, and shapes students' ability to make independent discriminations about their own playing. Teachers further ensure that students are making appropriate, independent discriminations by asking them to verbalize those discriminations in lessons.

Performance technique is described in terms of the effect that physical motion creates in the sound produced. The sound that students produce is consistently the focus of the teachers' attention. Irrespective of the physical aspect of playing (physical technique) that may be the immediate focus of attention, teachers systematically pair physical motion with its effect on sound production. In this way, physical technique simply supports the main goal of creating characteristic sound quality. Pointing out the rela-

relationship between physical motion and the effects that physical motion produces is true not only with regard to tone production, but also in the production of musical effects (e.g., phrase endings, sense of line).

Technical feedback is given in terms of creating an interpretive effect. Once students have learned how a given physical motion affects sound production, teachers are able to use technical feedback to alter musical expression. Teachers guide students toward creating an appropriate musical effect by describing and modeling how the physical movements that change sound can be applied to achieve an intended interpretive effect. Often, the techniques they describe can be transferred between phrases in the piece and between pieces in the repertoire.

Negative feedback is clear, pointed, frequent, and directed at very specific aspects of students' performances, especially the musical effects created. Negative feedback is given succinctly and is pointedly directed at improving performance quality. The frequency of negative feedback is markedly higher than the frequency of positive feedback. The content of negative feedback is consistently quite specific and explicit, making the students privy to the teachers' highly refined auditory discriminations. This contributes to students' learning to make finer discriminations about their own playing. The clarity and directness of the negative feedback facilitates the efficient correction of errors.

There are infrequent, intermittent, unexpected instances of positive feedback, but these are most often of high magnitude and extended duration. In an effort to elicit change in students' performances, teachers provide frequent negative feedback that is directed at improving the quality of performances just executed. Contrastingly, when students achieve important goals, or independently create musical moments that are stunning to their teachers, the teachers give positive feedback that clearly expresses their excitement about the students' accomplishment. The positive feedback is emphatic and detailed. In a given instance, positive statements are repeated several times. This happens at least once in nearly every lesson and is unmistakably differentiated from the communication of negative feedback.

The teachers play examples from the students' repertoire to demonstrate important points; the teachers' modeling is exquisite in every respect. In all instances in which the teachers demonstrate, whether singing, gesturing, or playing, they embody the expressive elements of the music while executing the example nearly flawlessly. The teachers often juxtapose a remarkably faithful imitation of the student's performance with their intended model of the performance goal, evincing a definitive level of technical command and fluency.

DISCUSSION

Perhaps most remarkable about the findings of this study is the consistency with which the 19 elements present themselves in the work of three teachers who teach in different performance domains—winds, strings, and keyboard—all of which pose different

technical and pedagogical challenges. The personalities, professional backgrounds, and professional experiences of our study subjects also vary, yet their teaching is strikingly similar at the level of the three categories that we identified: Goals and Expectations, Effecting Change, and Conveying Information.

We propose that the elements of teaching appear so consistently, both among lessons and among teachers in this study, because these elements comprise the highest form of instructional skill in music. We suggest that these teachers, all of whom have risen to the very top of our profession, teach the way they do because it is the way that students learn best. Of course, whether our conjecture is accurate will be borne out by further research that looks at these questions in the contexts of other teachers and by using different, and more precise, methodologies than we employed here. But the stability of the elements in the contexts observed is an important indicator of the validity of our observations.

It may be argued that the teaching observed in this study represents a special case, namely, performance instruction at a near-professional level of skill. And it is undeniably true that the students we observed were highly motivated, dedicated, and diligent. Yet, the question of generalizability to other music teaching settings remains open. Just as there is yet no systematic evidence that the teaching we describe here would be effective with younger students who may be less skilled, less motivated, or less intelligent, neither is there evidence that it would be ineffective.

Regardless of the idiosyncrasies that differentiate students from one another, there are common principles of human learning that apply to all students, and the 19 elements identified in this work seem to address the teaching-learning principles that are generally understood and accepted by the discipline (e.g., providing good models, defining instructional goals, conveying information effectively, giving discriminative feedback). The specific instantiations of these principles in the teaching we observed are in many ways consistent with the accepted notions about what constitutes good instruction—providing excellent musical models, for example. But there are other examples that are at variance with some aspects of accepted convention, such as the high ratio of negative to positive feedback. These similarities and differences deserve further scrutiny.

The goals of teacher preparation must be defined by a clear picture of the very best of instructional practice. Whether our discipline has yet defined such a picture is arguable. Doing so requires the application of all forms of observation and analysis, including systematic observation, case study, and other forms of description. Findings from this type of research are important in that they begin to illuminate aspects of teaching practice that may not be easily measurable using pre-defined observation procedures and may not be apparent to a casual observer.

The data from this investigation provide a rare glimpse into the day-to-day teaching practice of very highly skilled professionals. Although they all have been observed frequently in master classes, observing their work in the private studio has been the

privilege of their own students. As is true in any discipline, all of us have much to learn by carefully studying the very best among us.

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ENDNOTES

- ¹ Biographical summaries were provided us by the subjects themselves.