Notes and Opinions

Improvisation and Teaching

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In music, the term “improvisation” refers to a performance practice in which the instrumentalist extemporizes, playing something that is not written in the score. In a broad range of musical cultures from around the globe, improvisation has always been a prominent feature of traditional genres. Even in the European tradition, improvisation was common, even expected, well into the nineteenth century.

The current musical culture in Western countries—one in which a highly skilled instrumentalist may be completely incapable of improvising—is historically and culturally unique. Today, in Western cultures, improvisation is almost completely absent from the high art tradition and, consequently, is almost completely absent from the music education curriculum.

When performers are skilled improvisers, the creators who prepare musical scores can proceed differently—they do not have to be as prescriptive and can leave many elements of the performance unwritten, allowing the creativity of the performer to fill in the blanks. The great majority of school-educated classical musicians today are unable to improvise; instead, their training prepares them to read a score accurately and quickly, and to execute the music as written. As a result, musical scores are highly prescriptive, further reinforcing a musical culture that does not hold a place for improvisation.

In spite of the fact that the most widely performed and listened to musics are rooted in fundamentally improvised genres, formal music education is focused on teaching instrumentalists to accurately read sheet music and does not teach them to improvise. The popular music of today has its roots in jazz, blues, folk, and hip hop, all of which originated as improvised genres and each of which retains its improvisational aesthetic today. Most of the world’s musics are deeply improvised as well. If formal music education focuses on reading and executing sheet music alone, it will only prepare students for a narrow experience of music—an experience of a historically and culturally unique musical culture, rare in its neglect of improvisation.

In this essay, I make a radical claim: I argue improvisation should be at the core of the music curriculum. Improvisation should come first and should remain at the core of music education throughout the later years of increasing expertise. The ability to read sheet music and to perform a written score flawlessly should come rather late in one’s musical education. Certainly, this should be the case for all students who are not intending to pursue careers as professional instrumentalists. But even for those students who may one day choose to continue music as a career in the conservatory, having a solid grounding in improvisational practice would provide them with a better foundation.

In contrast to this radical claim, one might suggest a more incremental change to music education: to keep it essentially as is, but while carefully introducing some improvisational practice into the current music education curriculum. But this would be a mistake. It would allow the core flaw at the heart of our musical culture to persist—the implicit assumption that the nature of musical performance is to accurately execute a composer’s past vision. Instead, we need a transformation of our musical culture, one that upends the relationship between performer and composer, one that places the performer at an equal status with the composer, and one in which both performer and composer contribute creatively to music.

I support my claim with two distinct lines of argument. First, placing improvisation at the center of music education is beneficial for inherently musical reasons. Musicians educated in this manner will have a better developed ability to think musically—to deeply understand music, and will be better prepared to interpret written scores. Musicians educated in this manner will also be stronger ensemble performers—more highly skilled at listening closely to their fellow musicians and responding with understanding. Second, I believe improvisation is a better pedagogical practice in general and not just for music education. I’ll start by making the second argument and then return to the first.
Improvisation as a Pedagogical Practice

What is the goal of education? What do we want our students to have learned by the time they graduate? A relatively new discipline called the learning sciences has been exploring this question, by drawing on the basic scientific study of how the mind works—cognitive science (Sawyer, “Cambridge”). Beginning in the 1970s and 1980s, cognitive scientists studied the mental structures and processes underlying expert performance—examples include doctors diagnosing a patient, lawyers analyzing a case, architects designing a building, and scientists interpreting the results of an experiment. After several decades of such research, we now have a good understanding of what sort of knowledge underlies expert performance:

1. **Deep conceptual understanding.** Experts haven’t simply memorized a large repertory of facts. Of course they know a lot of facts, but in the expert’s mind, those facts are embedded in complex conceptual frameworks. Experts understand the mechanisms underlying phenomena and are able to explain surface features in terms of underlying mechanisms and conceptual structures.

2. **Integrated knowledge.** Each piece of knowledge is highly interconnected with all of the other pieces of knowledge. Expertise does not result from possessing distinct compartmentalized knowledge; everything known is related in an integrated framework.

3. **Adaptive expertise.** Experts have mastered a large range of standard procedures and solutions. When first encountering a new problem, they typically will quickly recall a variety of similar problems they’ve encountered in the past, and they will begin by considering one of the solutions that has worked in the past. But experts do not simply apply these memorized procedures in rote fashion; they are able to flexibly modify the routines they’ve mastered or to combine elements of distinct routines as is appropriate to the new problem.

4. **Collaborative skills.** Experts work together with other experts in teams and in complex organizational structures. Unlike the hierarchical corporation of old, where everyone’s job description was quite specific, the boundaries between each team member are fluid, and many tasks require the simultaneous and joint contributions of multiple experts to be successfully accomplished.

These four features of knowledge had been identified by cognitive scientists with the goal of better understanding the mental structures and processes of the human mind. These are the features of knowledge as possessed by what we today call knowledge workers—the educated professionals of the knowledge economy. Since the 1970s, when cognitive scientists first began to study expert knowledge, knowledge workers have become an increasingly large sector of the workforce in many developed countries while the traditional industrial working class has declined (Florida).

These four features of knowledge are also required for effective musical improvisation. Improvisation requires that a performer have a **deep musical understanding**—rather than solely a straightforward performance of a score, the performer must have knowledge of the harmonic and rhythmic structures of music. Their knowledge of music must be **integrated**—the harmonic, melodic, and rhythmic elements must weave together to generate a whole. Improvisation requires **adaptive expertise**—improvisers almost always develop a large set of short melodic phrases or “ready made” musical passages but rarely perform them without modifying them to fit the immediate musical context (Sawyer 58-59). In addition, almost all improvisational genres are ensemble genres, requiring musical collaboration.

Now that learning scientists have developed this new understanding of the mind, it raises the question: Do the classrooms and curricula of today result in graduates who possess this kind of knowledge? The answer, unfortunately, is too often “no.” Schools today are still very similar to the schools of fifty or even a hundred years ago, schools that were designed in an industrial age. Rather than acquire conceptual understandings, students memorize facts. Rather than gain integrated knowledge, students learn compartmentalized knowledge—each little bit of knowledge is learned in one six-week unit, and then the textbook moves on. Rather than practice adaptive expertise, students memorize step-by-step procedures to solve well-formed problems of a known type. And rather than develop collaborative skills, students study, learn, and are tested individually.
The knowledge age requires a new kind of learning environment, and in the last fifteen years or so, learning scientists have been experimenting with new designs. These new learning environments go by different names, including project based, inquiry based, and problem based. They are unified by their goal of generating graduates whose knowledge includes the four features I identified above: conceptual understanding, integrated knowledge, adaptive expertise, and collaborative skills. A broad review of recent learning sciences literature (for example, Sawyer “Cambridge”) reveals that these new learning environments are unified by their improvisational nature—they place students in loosely structured environments, where they work together in a relatively unstructured, improvisational fashion. This should not be surprising given the parallels identified above between improvisation and the four features of effective learning environments identified by the learning sciences.

These classroom designs are improvisational and collaborative; they have students work in groups to solve their own problems. The approach is ultimately based in constructivism—a theory of learning that argues students must actively construct their own knowledge, rather than passively absorb it from a teacher or a book. Yet, it is at several removes from constructivism in that researchers are working to identify the best “scaffolds” to put in place in order to support students so they can more effectively construct the correct knowledge, the knowledge that we want them to learn. In these learning environments, different student groups can develop different solutions to the same problem which is exactly what you would expect if they were truly given the freedom to improvise.

In many schools today, students still sit at desks in rows, and fill in worksheets to master compartmentalized and decontextualized bits of knowledge. But in the classroom of the future, groups of students will improvisationally work together to solve open-ended problems. By engaging in these collaborative improvisational activities, they will master the four features of expert knowledge.

Improvisation in Music Education

Throughout history, in a broad range of cultures, music has been an ensemble art form. Individual songs were not composed but were inherited from tradition; performance practice almost always allowed for performance creativity. Through the small creative contributions of individual performers, over time, a song or a genre would slowly change and evolve (Sawyer 61-63).

The separation of composition from performance is historically recent. When musical notational systems first emerged in medieval Europe, they were transcriptions of existing performance traditions. These early notational systems assumed performers knew how to perform in the genre, which meant that improvisation on the part of performers was assumed, and the notation was written accordingly. Slowly, over the centuries, notation became much more prescriptive. This change corresponded to an increase in the number of instrumentalists: in many cases, these new instrumentalists were amateurs, members of a growing middle class, and composers could no longer assume that the purchaser would possess a wide depth of performance skill.

The full historical story is beyond the scope of this essay; but, for a combination of complex reasons, we find ourselves at an unusual point in Western countries in the twenty-first century: the creation of new music is almost exclusively associated with composers, and a performers’ primary role is to execute those compositions. In this division of labor, instrumentalists do not need to be capable of creating new music, nor do they need the correspondingly deeper conceptual understanding of music that underlies composition. Although, of course, all would acknowledge that instrumentalists are creative, in our culture’s stereotypical view, we do not think their creativity is of the same order as the composer who generates the score.

This view of instrumentalists is surprisingly similar to the industrial-era view of what kind of knowledge a student should learn: decontextualized, compartmentalized, and individualized. In industrial age schools, students do not learn the deeper conceptual understanding and adaptive expertise that would allow them to generate new knowledge. Rather, they learn to memorize and regurgitate existing knowledge. As a result, they are not prepared to function in the creative society of the twenty-first century.

What do we want our students to learn from musical education? The question has at least two answers: one answer for those students who might go on to a professional career in music, and a second answer for the rest of the population, students who are required to take music as part of their general education. I believe the current score-oriented pedagogical method is inappropriate for both types of student. For professional
musicians. An education centered on improvisation would result in the four features associated with expert knowledge. Professional musicians certainly need to be capable of thinking like musical experts; it would not be sufficient if they were simply capable of executing a score flawlessly. For general education: Students exposed to an improvisation-focused curriculum would gain a deeper understanding of how music works and a more profound appreciation for the nature of musical creativity. Students would be more readily able to understand non-Western musical traditions, where improvisation and collaboration are still the norm.

Once schools are redesigned to align with learning sciences findings, students will begin to learn all subject areas in fundamentally improvisational ways because these pedagogical practices are the ones that lead to knowledge that has the four features associated with creative knowledge work. As this transformation gradually takes place, old-fashioned music education will increasingly seem like a relic of an older, industrial era. But this doesn’t have to happen; my hope is that music education will lead the way in moving to a new type of pedagogical practice, one that is grounded in the learning sciences, one that is based in improvisation.

Notes

1 My experience in public school music programs is that the focus is exclusively on score-reading genres. This includes general education, such as with the famous plastic recorders of various brand names that are famous to students throughout the U.S. (in my school the brand was "Flutophones") and school bands.

2 See, for example, Parrish and Grout—both canonical texts, long used in classical music education.

Works Cited


