

Music 344

Thinking about thinking in practice

James Scholar Honors Project

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Thinking About Thinking in Practice

'We have a concert in two weeks, every one of you needs to take home your folders and instruments and practice' is a phrase echoed across nearly every band room at all levels of public education. But what does that mean to the average instrumental music student? Recent studies suggest that- unless students have been taught otherwise - typical music students, especially beginners, may spend as much as 90% of their practice time playing through a piece in its entirety, repeatedly going from start to finish without using a deliberate rehearsal strategy to improve their performance (McPherson & Davidson, 2006). This problem is due, in large part, to the fact that self-directed learning, the kind required for effective practice, is a highly involved process that is rarely called upon in other academic subjects (McPherson & Zimmerman, 2002). As was found in one case study of several beginning band students: "Expecting children to sustain independent learning between lessons is a considerable demand, and one that often becomes a source of friction at home, [because] practice becomes another chore to add to general homework... Simply telling children to practice is not sufficient to foster the [motivation]... they will need if they are to make significant progress" (Pitts, Davidson, & McPherson, 2000). In light of these issues, when considering practice one must ask 'how is effective practice accomplished?' and 'how can students be taught to practice effectively?'

Musical practice may be employed to accomplish many purposes including developing technical abilities, learning new music, refining musical expression or memorizing a piece (Barry & Hallam, 2002). In practice "performers work to accentuate their individual strengths and eliminate their weaknesses" (Jørgensen, 2004). One expert is cited as describing effective practice as "that which achieves the desired end product, in as short a time as possible, without interfering with long term goals" (Pitts, Davidson, & McPherson, 2000). That is to say that there are countless ways in which one could attempt to practice, however the best results will be achieved when an approach is well suited for both the practitioner and the task at hand. Perhaps even more fundamental to efficacy in practice than the methodology used is the degree of motivation on the part of the practitioner. Highly motivated students will probably remain on task despite the inevitable distractions that occur during an in home practice session, whereas unmotivated students may while away large portions of their practice time by daydreaming or doing unnecessarily lengthy maintenance routines in order to avoid true practice (McPherson & Zimmerman, 2002), (Pitts, Davidson, & McPherson, 2000). While the many degrees and types of motivation cannot be addressed at this juncture, giving consideration to the importance of motivation is preeminent in any attempt to encourage

students to practice, because students will be much more dedicated to overcome challenges if they are intrinsically motivated to improve (McPherson & Davidson, 2006).

Another major factor related to success in practice is the amount of musical knowledge the student has to draw upon when practicing. For example a musician must be able to detect his errors while playing through a piece before he seeks to correct them. As a student develops greater musical knowledge he will have a more accurate schema of what should be happening, even in an unfamiliar piece, thereby improving how he applies practice strategies to increase proficiency. Thus as the depth of an instrumentalist's musical knowledge increases he becomes more autonomous in his practice (Barry & Hallam, 2002).

Once a minimal degree of proficiency is attained "students need to reflect on their use of strategies during practice as a prerequisite for being able to use a range of skills systematically" (McPherson & Zimmerman, 2002). In other words a student needs to think about what skill they are trying to improve and determine which type of practice strategy (i.e. changing the tempo, isolating a specific segment etc.) is going to be the most helpful. This reflection is at the heart of an ability referred to as metacognition or the ability to think about one's own thought process. In the case of musical practice metacognition provides an avenue to recognize individual strengths and weaknesses, as well as gaps in knowledge. Metacognition also permits the evaluation of progress in learning during practice (McPherson & Zimmerman, 2002).

When a student has developed mature metacognitive abilities, which are a product of both cognitive development and expertise (Barry & Hallam, 2002), students are able to turn practice into 'self-teaching' in which they "act as the teacher's deputy, [by] assigning themselves definite tasks and supervising their own work" (Jørgensen, 2004). In so doing a student is planning his practice session in nearly the same way that his teacher would prepare to teach him. The student should start by establishing a goal or target and then planning what he will do to attain that goal, by deciding from his repertoire of practice strategies which actions or thought processes will be most effective in bridging the gap. Once a preliminary plan of action is established traditional practice begins; the student will implement practice strategies (e.g. modification, segmentation, singing, silent fingering, theoretical analysis etc.) and observe himself as he does so in order to determine if it is effective, and whether his target has been achieved. These reflective strategies are characteristic of successful practitioners because the quality of the mental processes employed in practice corresponds to the resulting performance quality (McPherson & Davidson, 2006). At an expert level practitioners will even be able to synthesize and create new learning activities and practice strategies that will aid them in overcoming challenges faced in practice (McPherson & Zimmerman, 2002). This cyclical approach to practice which includes goal setting, planning, rehearsing, observing and reflecting

is far superior to the haphazard methods employed by typical music students as described earlier. The benefits are also much more appreciable; a student who practices effectively will recognize that he is having success which will cause a positive growth cycle. Self efficacy will increase which will inspire the student to take on more challenging material and be persistent until success is achieved in this more difficult task, which in turn increases self-efficacy even further. In this way more time will be invested in practice, more will be accomplished within that time, greater technical facility will develop, enjoyment will increase and even social support will grow as a natural extension of successful practice (McPherson & Zimmerman, 2002).

It almost goes without saying, that when a music teacher tells a student to practice they intend for the student to practice effectively, but as has been illustrated above; good practice is a complex task that only the most elite students would ever adopt spontaneously. If students have not been taught how to practice efficiently then they will inevitably practice in some less desirable manner. It is therefore the duty of the music teacher to be the expert on practice and teach students the methods and strategies they need to use in order to practice well. But how should a teacher go about teaching practice? It should be apparent that deeply effective practicing, which is both independent and dynamic, is a skill that takes years to develop and is only typical among musicians performing at a nearly professional level (Barry & Hallam, 2002). However, the effective music teacher will have a vision of what his pupils should be able to accomplish considering their development and experience (McPherson & Davidson, 2006). With this objective in mind teachers will be able create a plan that will guide students in bridging the gap between the initial ineffective approach to practice and the age appropriate ideal form of practice (Byo, 2004).

How does one determine what is the paradigm of effective practice at a particular level of development? Research suggests that self-regulation (which is key in the implementation of a planned practice session) begins to show the first clear signs of development at about the second grade level; at about fifth grade self-regulation has developed sufficiently to incorporate goal setting but it is not mature until approximately the eighth grade (McPherson & Zimmerman, 2002). Theorists believe that the development of the self-regulatory skills needed for effective practice is accomplished through social interaction. They also have identified four recognizable hierarchical stages of development which are: Observation- gaining familiarity with the task through a model, Emulation-imitating the behaviors observed in the model, self-control – independently applying the skill learned from the model within a structured environment, self-regulation – adapting the skill for use in a variety of settings (McPherson & Zimmerman, 2002). Therefore, in ideal practice for younger students teachers will need to help establish clear goals and a set structure or routine to follow that is appropriate for young attention spans. Young music students will need to be taught a few clear and simple procedures

for detecting and correcting errors at specific points within the practice routine. As students mature and become more comfortable with practice they should be permitted to establish their own goals, be exposed to a variety of possible rehearsal strategies and be given more flexibility in the structure of their practice.

Instruction on practice at all levels of study requires careful sequencing and well planned scaffolding to allow students to develop multiple dimensions of musical skill without becoming bored or overwhelmed. Considering that observation is the first tier in the development of self-regulation it is of the utmost importance that teachers provide clear models that employ the specific practice methods being taught throughout the course of the lesson. This allows students to experience the method first hand and increases the likelihood that they will be able to imitate those techniques. Effective modeling is especially important because research has shown that the way that teachers demonstrate tasks and the practice techniques which teachers have students attempt in class have a greater influence on how students practice than the verbal instructions they provide to the students (Barry & Hallam, 2002). Even so, simply modeling rehearsal techniques without further explanation would not be sufficient. In order for a student to be able to select the best practice strategy for addressing a challenge in the context of a musical work they must have a clear understanding of the intent of an exercise, as explained by the teacher, in addition to a clear model of how it should be done. By providing an explicit description of the purpose of a practice technique and situations in which it should be employed the student may become more aware of the problem addressed by the technique in his playing thereby improving his ability to reflect in practice and make improvements to his performance.

The scaffolding provided by teachers is a key instructional tool to help students move sequentially from complete dependence during music learning activities to relative independence. One of the earliest steps in the process is supervised practice. In this scenario a student will have a guided practice session with his teacher, who can ask leading questions, aid in task selection and provide timely pedagogical reminders in order to assure that the practice time is used successfully and efficiently (Barry & Hallam, 2002). Ideally a teacher will be able to provide instructions to parents such as a procedure and goals that will allow them to supervise their child's individual practice session and aid in their success. This is important in part because most young children do not consider remembering to do their homework or practice to be their own responsibility so music teachers must rely on parents to remind students to practice regularly. Another reason to involve parents in practice is that children learn how to become effective practitioners through social interaction (McPherson & Zimmerman, 2002). Children will become motivated to practice as they are reinforced by parents and teachers. Likewise as parents help by including practice time in their child's daily schedule, help to set up a conducive rehearsal environment and help keep the child on task during practice sessions the child will

come to understand that these factors are important when practicing. Eventually, as a result, the student should adopt these good habits even when working independently (McPherson & Zimmerman, 2002).

Additional scaffolding for practice could be provided through practice guides such as worksheets or diaries. These aids involve written forms of reflection which could be used to systematically require students to do an increasing amount of goal setting, planning and evaluation as they develop their ability to practice independently (McPherson & Zimmerman, 2002). Not only will such guides help provide structure for effective practice when a student is not yet autonomous, it will also increase a student's sense of accountability for his practice. As an added bonus filling out practice guides or diaries requires greater musical thought than filling out practice timesheets even when they are falsified. It is likely that requiring students to reflect upon their playing through practice journals will help students to more fully internalize practice goals and increase their ability to evaluate their advancement (McPherson & Zimmerman, 2002). Written practice aids also serve as a method for providing frequent assessment of practice which will establish the importance of continuing effort to improve. Teachers should review practice logs at every lesson ensuring that a high standard is maintained, providing feedback that recognizes growth and guiding further development (McPherson & Zimmerman, 2002).

In all, instrumental performance is a complex task that requires musicians to put forth a great deal of effort to overcome numerous technical and physiological issues so that they can focus on the more pleasurable task of playing expressive musical phrases filled with emotion. Such higher level music making tasks can be attended to earlier on in the music learning process if the practitioner understands how metacognitive strategies should direct the selection practice activities so that time will be used to efficiently improve performance. The challenge that young musicians face when practicing, which music teachers must seek to overcome, is that the self-regulation required to improve performance through self-directed study has not been sufficiently developed. This is not surprising because it is rarely required in other areas of academic study. Therefore instrumental music teachers should be aware of the realities of student-direct practice and provide instructions and tools that will help improve his students' effectiveness. While this process maybe time consuming, particularly when young students are involved, it is an investment in the students' futures which could impact everything from their feelings about music making to their sense of self-worth.

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