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*This yearlong qualitative study is an examination of 10 undergraduate preservice teachers' lesson planning for the classes and/or individual lessons they taught in a university string project. Data analysis revealed that these preservice teachers held differing views of lesson planning from each other and from their supervisor. Five themes emerged: (a) concerns about knowing how to begin to plan, (b) difficulty identifying what the children needed to learn, (c) the prominence of decisions made on the fly, (d) comparisons of thinking about teaching and planning with actual written plans, and (e) limited transfer of in-class experiences to teaching in the project. Suggestions for teacher educators include acknowledging the complex nonlinear relationship between planning skills, teaching experience, and professional knowledge; structuring guided experiences with a variety of lesson planning formats (e.g., written, mental, verbal); and maximizing opportunities for preservice teachers to reflect on connections between their experiences as students and as teachers.*

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## Preservice String Teachers' Lesson-Planning Processes: An Exploratory Study

Teacher-educators often use preservice teachers' lesson plans and postteaching reflections as windows to understand their thinking about teaching and, ultimately, their observed teaching behaviors. While a cycle of planning, teaching, and reflecting after teaching may seem straightforward, it can be difficult for a beginner to enter the cycle.

The paradox of learning a really new competence is this: that a student cannot at first understand what he needs to learn, can learn it only by educating himself, and can educate himself only by beginning to do what he does not understand. (Schön, 1987, p. 93)

This paradox sheds light on the popular adage, "experience is the best teacher," long accepted as conventional wisdom (Feiman-Nemser & Buchmann, 1985; Goodlad, 1984). Researchers have found that in-service teachers rate actual teaching experience as the

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most valuable aspect of their teacher-education programs (Conway, 2002; Zeichner, Tabachnick, & Densmore, 1987). However, recognizing that "experience" is not synonymous with "expertise" (Berliner, 1987), they have studied the empirical basis for this popular belief from multiple perspectives. Three of these include (a) the role of planning and teaching experiences in learning to teach; (b) the development of teaching expertise; and (c) the interaction among preservice teachers' beliefs, observed behaviors, and experiences in teacher-education programs.

Evidence exists to support a link between teaching experience and skilled teaching performance. Most such studies in music education have examined the effect of teaching experience on observed teaching effectiveness. Student teachers with more previous authentic teaching experiences demonstrated a significantly higher quality of initial teaching performance in student teaching (Paul et al., 2001). Butler (2001) examined connections between 15 music education majors' experience and their understandings of effective teaching. Using the concept maps they drew as evidence of growth, she found that just two microteaching experiences, one with university peers and one with a junior high girls' chorus, produced small but important changes in their understandings of teaching effectiveness.

Expert teachers seem to reference their own prior experiences in planning for and responding to complex events in a classroom (Carter & Doyle, 1987). Bauer and Berg (2001) sought links between selected factors and instrumental music teachers' planning, teaching, and assessment practices, and found that teachers cited their own experience as the most influential factor in their planning for instruction. Novices often have insufficient experience to reference. They may attempt to notice everything and "don't know what to ignore" (Carter, Cushing, Sabers, Stein, & Berliner, 1988). As novices gain experience in the classroom, their cognitive perceptual processes become more refined, and they develop a repertoire of experiences that allows them to more efficiently identify, respond to, or plan for the relevant features of a particular "classroom scene" (Carter & Doyle, 1987, p. 149).

However, teaching experience itself does not necessarily produce more expert teachers (Feiman-Nemser & Buchmann, 1985). Teachers' beliefs and behaviors may interact with their experiences in powerful ways (Holt-Reynolds, 1991; Schmidt, 1998). Lortie, in his pivotal 1975 book *Schoolteacher*, identified an "apprenticeship of observation." He found that, during years of schooling, students form understandings of teaching grounded in their observations of their teachers and in their own experiences as students. They enter teacher-education programs with a sense of familiarity experienced by few other preprofessionals; they hold "lay theories" that create the illusion that they already "know" how to teach (Holt-Reynolds, 1991; Zeichner & Gore, 1990). These experience-based internalized models of teachers' lesson-planning processes may function to either promote or hinder learning in teacher-education programs (Dewey, 1933; Schmidt, 1998).

Few students have the opportunity to observe their instructors writing or using lesson plans. Thus, preservice teachers in methods classes may discount lesson planning “as a chore, necessary for [this] class and maybe for student teachers, but not part of the practice of teachers in the real world” (Harwood & Wiggins, 2001, p. 35). Robbins (1999) found that many preservice teachers view lesson plans as a script to be created and followed. They may think that a lesson is a disaster if their plan is disrupted, and successful when they are able to accomplish the script in every detail, regardless of their students’ responses. Harwood and Wiggins (2001) identified two metaphors held by many preservice teachers for planning and teaching lessons. The first, which may be “particularly powerful and comfortable for music students,” is that of a lesson as a performance by the “sage from the stage” for student “audiences” (p. 33). The second is that of producing a plan as a linear, mechanical, “fill-in-the-blank-on-the-form” process (p. 33). Harwood and Wiggins propose an alternate metaphor of lesson as a composition—an interactive, student-centered process in which teachers and students work collaboratively to “compose” or “produce” musical understanding.

Teaching experience seems to be necessary for the development of expertise in planning and teaching lessons. However, experience alone does not guarantee expertise. Which music teacher education experiences shape the lesson planning practices that preservice teachers carry into their future classrooms?

## PURPOSE OF THE STUDY

Research examining the role of teaching experience, the development of teacher expertise, and the influence of experience-based beliefs forms the backdrop for this exploratory study of preservice music teachers’ understandings of lesson planning. All 10 of the participating students were in their first or second year at Arizona State University. Therefore, this study focuses on the preservice teachers’ understandings of lesson planning prior to extended formal instruction in educational methods. Three questions guided this study:

1. What are these preservice teachers’ initial understandings of planning for class and private lesson instruction?
2. What patterns are evident in their planning for class and private lesson instruction?
3. How do these preservice teachers apply learning from a string techniques class in their planning for class and private lesson instruction?

## METHOD

This yearlong study is an initial look at data being gathered for a longitudinal research project with undergraduate music majors teaching in the Arizona State University String Project. I collected

data for this study during the String Project's second year of existence. Approximately 110 schoolchildren in the fourth through sixth grades from the metropolitan area were registered each semester for class instruction or private lessons. The teachers were paid an hourly work-study wage. All classes and lessons met on the university campus, in classrooms or practice rooms in the music building.

During the first semester of the year, I hired seven freshmen and sophomore applicants as String Project teachers (no upperclassmen had applied). Three more freshman and sophomore teachers joined in the second semester. Seven of the teachers were music education majors, two were music performance majors, and one was majoring in music therapy. One was a man and nine were women. Six of the 10 had taken or were enrolled in a 45-contact-hour course in String Techniques taught by me as well as a 15-contact-hour Introduction to Music Education course taught by another faculty member. Each of these classes included one opportunity to write a formal lesson plan and teach it to peers in the class. Beyond that, these teachers had received no formal instruction in lesson planning or teaching methods.

All 10 participants each taught four to six private lessons weekly. They selected music for their students, sometimes with my assistance. Only 7 of the 10 worked with the classes. Each of three teams of two undergraduate teachers taught a heterogeneous twice-weekly class of 10 to 15 fifth- and sixth-grade string students, while an experienced local string teacher, assisted by an undergraduate, taught a fourth class of fourth graders. I chose unison or two-part pieces for the classes, believing these would be more successful for the teachers than full orchestrations because of classes' unbalanced instrumentation and the challenges of rehearsing multiple parts. Teachers were responsible for, by the end of the semester, preparing their private students for a recital performance or their class students for a concert.

Because I serve simultaneously as the researcher, the director of the String Project, and course instructor, I took precautions as suggested by the university's Institutional Review Board to assure the teachers that their decision to participate in this research would have no bearing on their employment as a Project teacher or their grades in any of my classes. At the beginning of the school year, I described the research to them at a Project staff meeting and invited them to participate. I explained that all Project teachers would be treated as if they were participating in the research but that, if they chose not to participate, at the end of the year I would not use their audio- and videotapes in my research. I then left the room, and their consent forms were collected by a graduate assistant and held until the end of the school year, when I learned that all 10 teachers had agreed to participate in the research.

Data included observation notes, interview transcripts, and written lesson plans. I observed each participant teaching at least two private lessons each semester and made field notes and audiorecordings of

the lessons, as well as audiorecordings of the discussions with each teacher following the observations. I observed each team of teachers working with their class approximately once every 2 weeks throughout the year, making videotapes of their teaching and audiotapes of our postobservation discussions. In addition, I made audiotapes and notes of the weekly String Project faculty meetings to document the information I presented to the teachers as suggestions or instructions for their role as teachers. I transcribed pertinent sections of the tapes verbatim, and created a case record for each teacher that included transcripts, observation notes, and lesson plans they had written. I requested peer review by two qualitative researchers, one of whom was involved with the String Project as a teaching assistant, to assure the trustworthiness of this report.

### **Data Presentation**

Researchers cited above have used a combination of written evidence, observation, and discussion to infer preservice teachers' understandings about lesson planning and teaching. I began this project intending to compare the preservice teachers' written lesson plans with the teaching behaviors that I observed in their private lesson and class instruction, and with their comments in our postobservation discussions. However, using written plans as evidence quickly presented problems. Despite my repeated efforts to model and encourage written class plans, only two of the seven teachers who taught classes wrote even sketchy class lesson plans during the year. I also asked the teachers to keep written records of the material covered in their private lesson teaching. In the first semester, when seven teachers were in the String Project, only three kept such written records and, in the second semester (when offered a small financial incentive for any form of written notes), only 7 of 10 wrote some type of lesson record. In fact, few of them showed much evidence of advance planning for either their class or lesson teaching, and none wrote the types of plans or lesson records I modeled for them in some staff meetings or in postobservation discussions. When I discovered that they seemed to hold vastly different conceptions of planning from my own, I revised my research questions to focus on their understandings of planning processes, using any written records they produced, combined with my observations of their teaching and their conversations with me. Other changes to my initial research questions arose from the opportunity to compare the teaching of the declared music education majors with that of the music therapy and performance majors, and to compare the teaching of the six who had taken two music education courses with those who had taken none. For simplicity, I use the term "preservice teacher" or "teacher" to refer to all the Project teachers, even though three of them were not seeking certification.

Five themes emerged through data analysis: (a) concerns about knowing how to begin to plan, (b) difficulty identifying what the chil-

dren needed to learn, (c) the prominence of decisions made “on the fly,” (d) comparisons of their thinking about teaching and planning with actual written plans, and (e) limited transfer of in-class experiences to their teaching in the Project.

### Knowing How to Begin

For the teachers in one-on-one settings, “planning” initially seemed to mean knowing how to select and teach music appropriate for each student’s needs. Amanda, the music therapy major, described some things she learned about teaching private lessons during her first semester in the String Project.

*Amanda:* It was a lot easier than I was thinking it was going to be. But then again, there are some challenges. I’m not saying that it’s completely easy.

*Marg:* What were some of the things at the beginning you were worried about that turned out to be easy? Do you remember?

*Amanda:* Just starting off [with a new student]. Yeah, I didn’t really know what I was going to say, but then, I don’t know, I just started thinking up all this stuff. Where is this coming from? [*She chuckles.*] Yeah, I didn’t really know where to start, and so I was, I didn’t know what we were going to start with working on, and whether it’s going to be challenging for them or not. I’m still questioning if it’s challenging for them or not, or if it’s too challenging, you know, if I’m skipping steps that I had no idea, that I didn’t even know existed, you know. So I think that’s just one thing I worried about coming in. (12/17)

Amanda’s feelings of not knowing where to start and what steps to take to help individual students were amplified for some teachers working in a class setting. Jennifer was consistently self-critical, questioning whether she was doing the “right” thing in her class and private lesson teaching. She was one of the few teachers who dealt with her feelings of not knowing where to begin by requesting assistance in advance, usually in the form of the experienced teacher or myself helping her develop a scripted lesson plan ahead of time. However, she was easily thrown off-balance when the children did not respond according to the plan she had in her mind. Jennifer’s comments demonstrate her feelings of not knowing as she experienced the limits of even a carefully prepared plan.

The hardest part is teaching them [a brand-new song]. ... I think I was just so flustered when they didn’t get it, and they didn’t [even] know the notes, and I’m like, “Okay?” If I’m not flustered then I can think of something else right at the moment to try [that’s not part of my plan]. (4/18)

### Knowing What Children Need to Learn

Perhaps because many of the teachers felt some success in “thinking of other things to try right at the moment” in their private lesson teaching, it was difficult for them to see the importance of planning for their students’ successful learning. Some of them were unable to

draw a connection between their presentation of information and the children's apparent difficulty in learning. In a discussion with me about a month after their class had started, Janet and Laura expressed their frustration at how little the students seemed to have learned during 4 weeks of class, even though they believed they had "taught" the material.

*Janet:* They [still] have problems with [reading the notes on] the G string, like they see an A and they play open G. And I'm like, "What finger's there?" I'm like, "Just go one [finger] on D and one on G."

*Marg:* Do you think they know how to read the notes? Because some of them may not have learned those notes at school.

*Janet:* Right. Well, a lot of them said, "We don't play a lot on the G string." I said, "Well, you are now." [*She laughed.*]

*Marg:* Because one thing I've found with kids is some of them need help, they don't see what the difference between those notes is.

*Janet:* Right. ... They still don't understand C naturals, too.

*Laura:* Yeah. I think some of them ...

*Janet:* [*interrupting*] Some of them can but a lot them just go, "Oh, there's a tape. Let me put my finger down." And [then they play] C-sharp. No.

*Marg:* So, what would be some reasons that kids wouldn't know the difference?

*Janet:* They learn C-sharp first.

*Marg:* Right. So, again, that's something they may never have heard at school.

*Janet:* Right. Well, I was asking a few of them, I mean, "What's the key signature?" And they're like, "2/4." I'm like, "No, the key signature?"

*Marg:* Right. They won't know that terminology, very few kids will.

*Laura:* I didn't know key signatures until I was a junior in high school.

*Janet:* Oh. (10/17)

Janet seemed to resist every suggestion I made to encourage her to write plans, or even think about planning, for classes or lessons. It seemed that she assumed every student's experience and learning style would mirror her own. Yet conversations with Janet later in the year revealed that she had begun to analyze her students' needs and set goals for them. Following an observation, Janet described one of her private lesson students to me.

*Janet:* That student is just really quiet and it takes a lot to open her up. Because she sits there. And I can see that she knows what the notes are. But she still stares at the page. And she's not quite sure so she'll put down a different finger and ... But I can see her brain working. It's like, there's a lag time between.

*Marg:* Um-hm. It's very slow.

*Janet:* Two weeks ago we sat here, we just stared at like a page of dotted half notes. And it took a good half an hour to get through, like, the first two lines.

*Marg:* Um-hm. So what kind of things have you been doing with her?

*Janet:* We've been doing flash cards to get her to know her notes. But at the beginning, she was able to—I think, it almost seems as it goes on, her brain just gets slower and slower, and her fingers go on. That means she was on the ball, like the first piece or so. I think as soon as, like they start throwing more notes at 'em, she starts to forget which finger is which.

*Marg:* Um-hm. That's hard.

*Janet:* So I think going over the flash cards [will help her]. (3/5)

This conversation contrasted with Janet's earlier frustration with what she identified as her students' inability to learn. Although she continued to avoid writing lesson plans, she seemed to be developing some ideas about setting goals and providing sequential instruction for her students.

### **Setting Goals and Teaching on the Fly**

The teachers demonstrated a range of specificity in the objectives they had in mind for their students' learning. I found ample evidence that some of them innately established specific pedagogical goals for their students. Some of their written logs for private lessons demonstrated that thought process. For example, Jamie's notes to herself included specifics about her student needing "new music next time." She also used arrows to show connections between one week's assignment and the next week's lesson, indicating that establishing sequential learning goals for her students came more easily to her than to most of the teachers in this study (see Figure 1).

Donna, one of the two performance majors, indicated a similar sequential approach to both daily and long-term planning in her class lesson plans. She often asked my ideas about ways to introduce a new skill or piece of music, and I observed her following the sequences I outlined for her. Donna took responsibility for writing daily plans for herself and her teaching partner, David, outlining both the order of the songs and some specific pedagogical points to rehearse in each song (see Figure 2).

In an interview at the end of her first semester as a String Project teacher, I asked Donna how she felt about teaching in a class setting.

get <u>NOTE NAMES</u> practice		
Lesson Record—Spring 2003		
Student _____		Phone _____
Lesson day and time _____		Location _____
Date	Attendance	Notes (What you worked on, assignment for next time, etc.)
2/12	√	Can-Can This Land Merrily note names hold bow
2/19	√	group song parts of violin worksheets flashcards DM scale Long tip tip long frog frog NEW MUSIC NEXT TIME
2/26	√	2 string builder pages —total 6 lines—play smoothly, more bow
3/5	√	memorize—Twinkle & Lightly at home prepare Old MacD and London Bridge hear all next time and do scales
3/13	√	Work on holding bow did and 3 new lines
3/26	√	Twinkle & Variations Thanksgiving Song—difference between half & quarter note * bent thumb new music next time
4/9	√	A Thanksgiving Song—Eng. Folk Song String Began Happy B-Day—pizz. sing notes & rhythm, air bow
4/16	√	String Song—half notes, whole bow, memory D Major scale—fr fr WB tip tip WB on 2nd H B-Day—reading the notes line
4/23	√	D Major Scale—long, short short H-BDay—notes bow hold German song recital piece —big sound w/piano
4/30	√	D major scale Concert piece

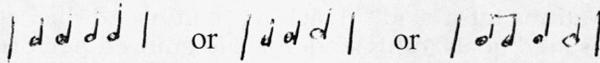
Figure 1. Jamie's Individual Student Lesson Record [original handwritten].

She talked about the difference between her own and her partner David's planning and teaching styles.

*Donna:* [brightly] The class I felt pretty good about. I think David and I had different styles, but I tried to compromise somehow, you know.

9/23

Me • D scale—echo first. Don't repeat top note



• Cotton-Eye Joe

Review 1 bar, then 2 vars, then whole line

- Start on C, then D
- Then back to A & B

David • Going Home

Echo w/dynamics

- 2 bars cresc
- 2 bars decres

Together • Note Recognition Flashcards

- D & A Strings
- Some G

( • Music Shall Live ) didn't get to  
• introduce

Figure 2. Donna's Class Lesson Plan [original handwritten].

*Marg:* Yeah. How would you describe the difference in your styles?

*Donna:* He feels much more comfortable improvising and things like that. And for me, it's just more the lack of experience. But doing that—I don't mind improvising the teaching of things that we have worked on enough. I don't mind trying to figure out something like that. But when it comes to teaching new material, and just on the fly doing like that, I can't do that. Not yet. (12/18)

Like Donna, most of the teachers seemed to view the ability to teach “on the fly” as something to be emulated. They seemed to believe that setting general goals for their students constituted sufficient planning. David, who wrote no private lesson records during the first semester and no class plans during either semester, expressed his goals for his students:

I know what it is like to be a “bad” kid, and I find that as a teacher I can show kids who are like I was that they can achieve higher goals, if only they find goals they want to achieve. Being a better musician and a more complete person are goals that I hope to introduce to all my students. If I can find one whose life is changed, then I will have passed on the gift that my teacher gave to me. (9/5)

My observations of David’s teaching confirmed his efforts to impart these stated goals to his students. He enjoyed performing for them, usually snippets of pieces he was working on in his own lessons. Following the example of his first private lesson teacher, David asked the class questions such as “How do you think that was?” after they played a song, with the intention of helping them develop their own goals. Yet he seldom gave any evidence of planning sequential instruction in musical techniques and concepts for any of his students. Rather, he responded to what happened in classes and lessons, following ideas that came into his head at the moment, as a means toward his general goal of helping his students become “better” musicians and “more complete” people.

### Writing versus Thinking

As I collected data for this research, I noticed that even those teachers who faithfully did write some form of lesson plans used sketchy notes that reflected little of the actual planning processes I was hoping to observe. Katie’s notes for one of Sarah’s lessons simply listed the titles of songs they worked on: “Billy [Boy]-review; Carnival of Venice, March.” However, Katie’s interaction with Sarah during the lesson revealed that she had a number of specific strategies in mind to achieve particular learning goals for each song listed in her plan.

*Katie:* We were doing Billy Boy [last week], weren’t we? Do you want to play it for me now? [*Sarah plays the song, stopping once.*] All right. Pretty good. Um, just one thing. [*Katie takes her violin.*] Okay. Do you remember those slurs that we were talking about? Where they’re all in one bow? So you got the right count this week, but they’re just, they’re all in one bow. So, watch my bow when I play this part, OK? [*Katie plays a measure, slurring and counting out loud.*] See how that was all in one bow? I mean, at least up to here? ... So you have to hold this for four counts, and this one is only one. [*Katie plays and counts.*] Let’s air bow it first, OK? And I’ll count. Ready, go. [*Katie counts the 5 beats as they air bow.*] Let’s do it one more time. Ready, go. Good. OK. Now, our bows on the string, and play it. Ready, go. [*Katie counts as they play.*] Good. OK. So, um, just start [at this measure], and then play to here. [*Sarah plays two notes before the slur and the slur.*] I think we need to go back a little farther. Start on the A. [*Sarah plays six notes and the slur.*] Good. Well, that wasn’t all good really, but we got the part that we wanted for slurs. (1/22)

Following this exchange, Katie worked with Sarah on how to produce dynamics in playing the same piece, then moved on to introduce a new piece, using similar step-by-step strategies. She also began each student’s lesson by having them play a scale that had a particular rhythmic or pitch focus related to that student’s repertoire, and

consistently managed the time well to implement my suggestion to work on a scale and at least two different pieces in each lesson.

Caroline kept no written records of her students' lessons. Yet her reflections on her work in the String Project, written for my String Techniques class, revealed a very thoughtful approach to setting goals for her students, as well as modifying her initial goals as she worked with different students. After writing about a cello student who was making rapid progress and enjoying the challenge to learn three octave scales, Caroline described two other students who came together for a lesson.

Maggie and Tiffany are two girls with the same type of character toward the cello and both play with the same style. It seems as if both of these girls are very nonchalant about the cello. I would always suggest for them to play something challenging for them in a very positive way, then they would stare at me and say, "I don't care, sure." Eventually I got the clue that these two girls were never going to practice at home and never have. So I tried a new technique (for me) with them. When they would come into their lesson we would just play songs together from the [String Project] classes. They had a lot of fun doing this, and they learned something in the meantime. There was a negative effect to this: the girls never really progressed technically. They still have the same technical problems they had before they started to study with me. I would always teach them how to change their bad habits but it never stayed with them because they did not practice outside of the lesson. I enjoyed having these two girls as students. They are very unique. (4/15)

### **Transferring In-Class Learning Experiences**

Six of the 10 teachers had taken my one-semester String Techniques class. This provided an opportunity to see how they applied what I thought I taught them in that class. What I observed, although not surprising, was humbling. I believed I had provided a reasonable model of planning and teaching, as I directed their own sequential learning of specific string techniques, followed by discussion of what I had them do and why. I had modeled writing formal lesson plans, and then assigned each student to write a plan and teach a song to the class. Although all six teachers had done well with the assignment in my class, none of them demonstrated those behaviors of their own accord in their initial work in the String Project. In my postobservation discussions with the teachers, I asked, "Do you remember doing this in String Techniques? Do you think that might be useful in this situation?" Most of them responded as Jennifer did: "Yeah, I knew that stuff is back in my head somewhere, I just don't remember it" (4/18).

### **DISCUSSION AND RECOMMENDATIONS FOR PRACTICE**

My choice of lesson planning as a focus for this study became problematic within the first months. When the informal written lesson plans I initially expected were not forthcoming, I chose to use a

range of indicators to illuminate the Project teachers' understandings of lesson planning. I included their thinking about teaching, before, during, and after the actual period of instruction, whether they directly discussed their thinking with me, or whether I inferred their thought processes from the behaviors I observed. I included Schön's (1987) "thinking-in-action" and "reflecting-on-action," but also included decisions that seemed less reasoned or unconsciously chosen. I discuss the findings in light of the three research questions that guided this exploratory study.

### **1. What were these preservice teachers' initial understandings of planning for class and private lesson instruction?**

Several of the teachers in this study seemed to view planning for instruction—or any advance thinking about teaching—as unnecessary. They trusted their ability to respond in the moment to whatever their students presented, and the other teachers seemed to envy their comfort with teaching on the fly. However, most of them acknowledged that they were unsure about what music to choose for their students and how to teach it, echoing Amanda's sentiments of "not really knowing where to start."

My data suggest that these teachers' planning was limited in part by their knowledge bases. Expert teachers possess at least three types of knowledge that guide their thinking and actions: content knowledge, general pedagogical knowledge, and pedagogical content knowledge (Nierman, Zeichner, & Hobbel, 2003). Expert music teachers are masters of the skills needed for music-making, have skills for working with individuals or groups, and know how to effectively communicate specific content knowledge and skills to a variety of learners. These freshmen and sophomores were in the midst of developing their own content knowledge and skills in music and were just beginning to analyze their own learning processes. Their teaching experience in the String Project was providing them with an awareness of their need to develop pedagogical and pedagogical content knowledge. However, their minimal mastery of all three knowledge bases probably limited their ability to demonstrate the planning skills I had hoped to observe, and my requests for written lesson plans put them in the uncomfortable position of being asked to produce evidence of "beginning to do what [they did] not understand" (Schön, 1987, p. 93).

It is here perhaps that the metaphor of teaching as a performing art (Paul, 1994; Sarason, 1999) is most useful. It takes hundreds, if not thousands, of hours of repetitive rehearsal and practice for an undergraduate student to prepare for a recital. Like performing on an instrument, teaching seems to require similar repetitive practice to master pedagogical routines and pedagogical content knowledge. Teaching also requires the fluency to improvise in response to one's students (Harwood & Wiggins, 2001; Robbins, 1999). This suggests that I was unrealistic in expecting a degree of teaching fluency with planning and teaching from the Project teachers on the basis of limited practice in the role of teacher in a few peer-teaching opportuni-

ties. The surprise to me was that even an entire year of regular authentic teaching experiences did not give them the well-developed planning skills I had expected to see, suggesting that early and extensive supervised field experiences may be even more crucial than the profession assumes them to be. The planning and teaching opportunities these freshmen and sophomores are having as Project teachers, combined with their learning in music education, academic classes, and performance classes, may perhaps help them develop and integrate more extensive bases of musical, pedagogical, and pedagogical content knowledge on which to draw as they move into methods courses and learn in a more structured way about planning lessons.

Some of these teachers seemed to want considerable guidance from me, and others seemed comfortable with—or perhaps were unaware of—their own “not knowing.” Teacher-educators can assure the tentative that their feelings of uncertainty and discomfort are indeed a normal part of the process of learning to teach. They can also challenge the comfortable to become more aware of the reciprocity between teaching (experiencing teaching as interacting with students) and planning (thinking in advance about teaching), and can encourage the oblivious, through reflection on their teaching, to discover what they do not yet know.

## **2. What patterns were evident in these preservice teachers’ planning for class and private lesson instruction?**

Analysis of these 10 teachers’ approaches to planning for class and individual lessons revealed sharp differences among individuals in their apparent desires or intuitive abilities to think in advance about their teaching. In the absence of written plans, it took conversations with the teachers to discover whether their teaching behaviors were planned in advance or implemented on the fly. One influence on their approaches to planning appeared to be their own learning styles. The seven teachers who kept written plans seemed to be those who preferred structured learning and linear thinking themselves, who turned in complete, well-written assignments on time, and noted future deadlines on their calendars. They seemed to find some kind of mental, aural, or written planning to be both comfortable and comforting (Robbins, 1999). Jamie and Caroline demonstrated an innate approach to planning sequential instruction for their private lesson students, although only Jamie kept written records of her students’ progress. Jennifer, Katie, Donna, and Amanda demonstrated a similarly intuitive style of planning, but seemed to desire more direction and reassurance. Although they only occasionally initiated requests for help, they seemed to appreciate my offers of a step-by-step process for presentation of a skill or concept, and were able to process my verbal suggestions and immediately apply them in their teaching. Interestingly, Donna, Amanda, and Jamie, among the most “natural” planners, were the three Project teachers who were not music education majors.

Those with a more random-abstract dominant learning style, or who were less organized in general, did not voluntarily write much. Neither did they seem to create sequential mental plans; rather, they just reacted to what happened at the moment, and seemed more resistant to my offers to help them structure or plan their teaching. Janet and Laura initially explained concepts to students in language familiar to themselves as undergraduate music majors, such as “key signatures” or “G-string notes.” While they understood their own thinking, they could not yet discover and build on what their students knew, and consequently did not plan for the alternative approaches their students might need. In contrast, although David described himself as “disorganized,” when pressed, he could articulate what he wanted his students to learn, along with several strategies by which he might help them learn it. However, when teaching, he was easily diverted from his initial instructional sequence by another idea he thought might inspire or help the students, which in turn sometimes led him even farther from the original goal he had in mind. Over time, all three of these teachers demonstrated a greater awareness of the benefits of planning specific steps to help their students learn. Even so, all three resisted writing even sketchy lesson plans throughout the year.

Discrepant learning styles also appeared to influence the planning of the three two-teacher teams who led class instruction. None of the teams engaged in the collaborative planning I expected; each divided the songs to be taught, assigning each piece to one of the teachers, with occasional meetings a few minutes before class to review who would do what in which order. Such a division of labor allowed the teachers who wanted the comfort of an advance plan to create one, while the teaching partners could operate with their preferred on-the-fly method. Each teacher’s style, whether more structured or on-the-fly, was internally consistent in both class and private lesson instruction, and appeared to match their own dominant learning style. In this study, perhaps because those who documented their thoughts in writing were self-selected, I observed no one who wrote well-crafted plans yet demonstrated inadequate teaching skills.

Thus the written plans these teachers submitted to me proved to be incomplete—or even misleading—indicators of the complex interaction among their intentions and teaching behaviors. Jamie’s and Donna’s written plans were more detailed than the others and closely paralleled the sequential nature of the teaching I observed. Katie and Caroline wrote very few of their thought processes on paper, but observations of their teaching, coupled with discussions with them, revealed that they gave considerable thought to the pedagogical choices I observed them making. Those choices often reflected “thinking-in-action” (Schön, 1987) more than the advance planning I had hoped to see. Jennifer and Amanda wrote sketchy plans, and both of them expressed considerable doubt and uncertainty about the wisdom of their pedagogical choices. However, my observations of their teaching revealed a thoughtful approach to

teaching, as well as what I considered wise intuitive choices for the situations they encountered.

Teacher-educators often use preservice teachers' lesson plans to "represent the expectations and preparations of the preservice teacher in tangible form, so that the methods teacher can offer suggestions, ask questions, and evaluate the quality of the preservice teacher's thinking" (Barrett, 1999, p. 29). The variety of discrepancies I observed in this study between written plans and teaching actions suggests that written plans may sometimes—but not always—provide a clear window into preservice teachers' thinking. The process of planning a lesson, teaching it, and then reflecting on it may not be as sequential or logical for inexperienced teachers as it appears to be to teachers with more experience. Those teachers who kept written records for their private-lesson students provided the best documented evidence of their developing planning skills. However, they did it retroactively, noting at the end of each lesson what they had worked on with the student and occasionally jotting some notes for things to cover in the next lesson. Until the point that lesson planning becomes a fluent skill, the greatest growth in understandings of that process may come as preservice teachers reflect on what actually happened, and revise—or perhaps even initially write—their plan after they have taught a lesson.

All preservice teachers need to practice writing formal structured lesson plans, if for no other reason than that they will someday be evaluated by an administrator who requires them to do so. Most of these teachers viewed written plans as either confusing or unnecessary. My findings suggest that both my students and myself would benefit from viewing a lesson plan, not as a sequence of events that can always be written in detail in advance, but as a "design that gets set in motion when teachers and students interact" (Robbins, 1999, p. 31). While students may comply by writing well-structured plans in classes where grades are a motivator, expanding the definition of "lesson planning" to include decisions made on the fly, mental advance plans, and reflection (written or verbal) may enrich teacher-educators' awareness of preservice teachers' understandings of lesson planning processes. Expanding the scope of what "counts" as a lesson plan may also encourage preservice teachers to attribute greater value to planning processes, despite their initial beliefs that lesson plans are disconnected from "the practice of teachers in the real world" (Harwood & Wiggins, 2001, p. 35).

### **3. How did these preservice teachers apply learning from a string techniques class in their planning for class and private lesson instruction?**

One of the most disappointing aspects for me of these findings is to acknowledge the limited effect that 45 hours of instruction in the String Techniques class apparently had on the Project teaching of the six teachers who took the course with me. Although the course focus was learning to play the instruments, not teaching methods, I expected their experience of planning and teaching a song to the class to

have more lasting effect, especially combined with my teaching model and explanations throughout the semester of my pedagogical choices for them as my students. I was pleased that, at least upon being reminded, most of them acknowledged that “that stuff is back in [their] head somewhere,” but was discouraged to observe so little transfer to their teaching of children.

It is possible that the limited value that in-service teachers seem to place on their university methods courses as a source of planning ideas (Bauer & Berg, 2001) is related to this limited experience with practical application in the context of a classroom setting. In their “apprenticeship of observation” (Lortie, 1975), preservice teachers seldom see models of music teachers, particularly private instructors and ensemble directors, setting instructional goals or writing lesson plans, in part because expert teachers have internalized these routines (Berliner, 1987; Carter et al., 1988; Hollingsworth, 1989). In field experiences and student teaching, in my experience, mentor teachers often ask novices to teach with little advance notice and with minimal assistance in preparing. Of necessity, these beginners may develop a degree of comfort with the type of on-the-fly teaching they believe is modeled for them by more experienced teachers. In addition, both experienced and novice teachers may believe that a teacher’s delivery style and personal skills are more important than accuracy of content or musical skills (Hamann, Baker, McAllister, & Bauer, 2000; Madsen, 2003). It is possible that the limited time music teacher educators have with preservice teachers, even in 4 years, is not sufficient experience to overcome the influence of the “apprenticeship of observation” with their high school and college ensemble directors and applied instructors. Conway (2002) lamented that the field experiences, applied faculty, and ensemble directors cited by in-service teachers as such crucial influences on their current teaching practices “were the parts of the teacher education program that we in music education really have the least control over” (p. 28).

However, this study’s data also suggest that these preservice teachers were influenced by their experiences in the String Techniques class. With reminders from me, that experiential knowledge was still “in the back of [their] head[s].” This suggests the need for teacher-educators to maximize cumulative opportunities to help preservice teachers integrate their university and field-based experiences. Students often experience their college courses as discrete units, and do not always transfer learning from one course to another, or from courses to the classroom (Wing, 1993). Music teacher-educators often have opportunities similar to mine where, over several years, I see the same preservice teachers in three different courses and also supervise their field experiences and student teaching. We can take a more active role in helping them draw connections with and build on all their current and prior experiences. We might more often talk with colleagues about the content of their courses or talk with our students about their own learning and teaching to help them draw connections among their life experiences, both within our classroom

and beyond it. Equally important, we can remain aware of their learning processes, remembering that their experience-based beliefs may cause them to discount their instructors' sage advice, including our own (Holt-Reynolds, 1991; Schmidt, 1998). We can acknowledge that they may not learn from the first presentation of a pedagogical concept, and provide them with ample practice opportunities to gain the fluency we hope to see (Paul, 1994). We can encourage them—and ourselves—to be patient and persistent with their learning, and to articulate and examine points of confusion or disagreement, even if it is our instruction they find confusing or less than credible.

### Future Directions

In the varied topography of professional practice, there is a high, hard ground overlooking a swamp. On the high ground, manageable problems lend themselves to solution through the application of research-based theory and technique. In the swampy lowland, messy, confusing problems defy technical solution. ... [I]n the swamp lie the problems of greatest human concern. (Schön, 1987, p. 3)

This exploratory study's findings raise "messy questions" about the incredibly complex relationships among planning skills, teaching experience, and reflection on that experience. Further research, both with this same group of preservice teachers and with others, is needed to continue to examine these relationships. What is the role of teaching experience in the development of content knowledge, pedagogical knowledge, and pedagogical content knowledge? What relationships exist among these knowledge bases and planning skills? What relationships exist among learning styles and lesson planning skills? What are the most effective ways to help preservice teachers develop both sequential and flexible thinking? Are there appropriate alternatives to written lesson plans that accomplish similar goals? Would planning skills be enhanced by revising and/or reteaching a plan—or even writing initial plans—after teaching? What differences and similarities can be found in planning for private lesson teaching, heterogeneous instrumental classes, or other music teaching-learning settings? The three teachers who were not music education majors displayed stronger planning skills than several of the music education majors. Is this an anomaly, or will I observe this pattern in subsequent years? If so, what does it mean for guiding college music majors in choosing a degree program?

Music teacher-educators might continue to explore alternative formats and approaches to lesson planning and, acknowledging the beginner's dilemma of being unable to plan effectively without sufficient experience, provide repeated opportunities for preservice teachers to practice planning, teaching, and reflecting on their plans. We can intentionally bring to light and challenge the "lay theories" about lesson planning (Holt-Reynolds, 1991) preservice teachers have developed from their "apprenticeship of observation" (Lortie, 1975), encouraging them to make thoughtful connections

among their own prior experiences as students and their experiences as both students and teachers in their university methods courses and field experiences.

During the current school year, 2 of these 10 teachers are enrolled in an intensive junior-year methods course; during the following school year, they will be student teaching. Similar opportunities for follow-up study with the other teachers may provide occasions to examine the effect of both teaching experience and university methods courses on their understandings of lesson planning and its usefulness in their own teaching.

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