

## [A Survey of Practice Behaviors among Middle and High School String Players](#)

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### **Abstract:**

We were interested in middle and high school string musicians' reports of how they spend their practice time and how often they use specific practice strategies. These 211 middle and high school participants reported an average of 5.64 years (SD = 2.61) of string playing experience, with an average of about four years of private instruction. Students in the most advanced of three ensembles reported more private lesson instruction than students in the other two ensembles. There were no differences in how students in the three groups rated the occurrence of the following strategies: self-recording of practice, varying articulations, varying rhythms, left-hand only practice, and right-hand articulation practice. Advanced students reported significantly more: listening to recordings, using a metronome, isolating shifts, repeating of short sections, part marking in general and marking half steps. Students made frequent comments regarding strategies used to improve intonation, such as use of a drone, practice with a tuner, and using open strings as a reference. When asked to provide advice to a peer, the most frequent advice was to practice slowly.

**Keywords:** music practice | string students | middle school | high school | private lessons

### **Article:**

Throughout their lives, proficient string players spend countless hours practicing. From the beginning of instruction, string students are told frequently to practice regularly and often are given specific practice requirements by their teachers and parents (Austin & Berg, 2006; McPherson, Davidson, & Pitts, 2000). However, students do not always follow the advice of their teachers (Kostka, 2002) and sometimes lack clear guidelines regarding how to practice (Burwell & Shipton, 2013). The question of how to practice most effectively, and how to teach

students to practice effectively, remains. In 2011, Miksza completed a comprehensive review of the literature that summarized the findings of over 150 articles devoted to music practice. Miksza presented a theoretical model based on music performance research that highlighted “salient variables important for further research and/or instructing a musician in how to practice” (2011, p. 83). In the present study, we focused on students’ practice strategies and knowledge as outlined in that model.

Investigations regarding the practice strategies employed by musicians can be grouped into three broad categories: surveys or self-reports of practice, external observations of practice, and comparisons between the perceptions of teachers and students regarding practice. Not surprisingly, many studies have found that increased practice is associated with increased performance proficiency (e. g., Ericsson, Krampe, & Tesch-Romer, 1993; Jørgensen, 2002). Other studies have found that the type of practice strategy used is more important than the amount of time spent practicing (Duke, Simmons, & Davis, 2009; McPherson, 2005; Miksza, 2007). For example, Miksza (2007) found significant correlations between performance achievement and use of the following practice strategies: repetition, whole-part-whole practicing, playing a passage slowly, using a metronome, and skipping to critical sections of the etude. Moreover, even the ability of a student to articulate a range of practice strategies has been associated with his or her performance improvement scores (Rohwer & Polk, 2006).

Investigations concerning the relative effectiveness of a variety of practice strategies on student performance have resulted in mixed findings (Rosenthal, 1984; Rosenthal, Wilson, Evans, & Greenwalt, 1988; Sikes, 2013). Sikes (2013) studied the possible effects of the following practice strategies on the performance of university string players: free practice, gradually working from slow to fast, repeating small sections, and playing the excerpt multiple times. Sikes found no significant difference in performance improvement between the four strategies, although all four strategies produced improvement. Positive gains have been shown in other studies in which students were provided with a model (Hewitt, 2001; Linklater, 1997; Rosenthal, 1984; Rosenthal, et. al, 1988), engaged in self-evaluation (Hewitt, 2001), or used self-reflective practice (Miksza & Tan, 2015).

Examinations of the practice strategies of young orchestra and band students have found that young instrumental musicians use repetition – with or without self-correction – as a frequent and preferred practice strategy (Hallam, 2001; Leon-Guerrero, 2008; McPherson, Davidson, & Pitts, 2000; Rohwer & Polk, 2006). Other preferred strategies of young instrumentalists have been noted as marking the part (Miksza, 2007) and varying the tempo (Miksza, Prichard, & Sorbo, 2012). Austin and Berg (2006) found that middle school band and orchestra students employed similar practice strategies. These strategies included: planning, listening to a teacher's advice about practicing, marking music, repeating sections of music, practicing slowly, rehearsing mentally, and self-evaluating. Hamann and Frost (2000) surveyed 512 string students grades 6-12 and found that students who studied privately reported being more goal driven, practicing for longer durations, and setting aside specific times of the day to practice.

In addition to examining the practice behaviors of middle and high school musicians, researchers have described the practice habits and strategies of university students. For example, Geringer and Kostka (1984) observed specific performance and non-performance activities of college music students during their practice time. They found that students spent about 75% of their practice room time engaged in performance activities and the balance of their time engaged in non-performance activities. These proportions were inconsistent with students' self-reported practice room behaviors, as students estimated spending much less time on non-performance activities than observations showed. Nielsen (2004) questioned university students on their practice strategies, and they reported the use of both cognitive (i.e., repetition and integration of new information with existing knowledge) and metacognitive (i.e., planning and monitoring progress) strategies frequently.

Researchers have attempted to extend the aforementioned descriptive studies to examine potential relationships between practice strategies and achievement levels of collegiate musicians. Based on a research project that was designed to investigate university students' approaches to personal practice, Burwell and Shipton (2013) concluded that there is a relationship between strategic approaches to practice and performance success. They also noted that musicians of any level are able to improve practice efficiency. Duke, Simmons, and Davis (2009) investigated the relationship between the performance level and practice strategies of piano students. They found that the most successful piano students: (a) accurately identified, practiced, and corrected the source of each error, (b) systematically varied the tempo of individual trials, and (c) repeated a targeted passage until errors were corrected and the passage was stabilized. Further, Duke and colleagues observed that the most successful pianists used the most strategies during practice.

Hallam (2001) examined the practice strategies of string players, ranging in age from six to 18, and found that repetition was the most frequently used strategy among students. She concluded that the development of expertise, more than lower-level strategy use, seemed to account for improved performance. Hallam found only a moderate relationship between such strategies and judges' performance scores. Expertise in domain knowledge and developing aural schemata, rather than age, were more closely related to increased improvement. In related research with other instrumentalists, investigators have found positive influences of greater use of practice planning and other metastrategies in musicians' development (Miksza, 2007; Williamon & Valentine, 2000).

In the present study, our purpose was to describe the self-reported practice behaviors of developing string players. We were interested in middle and high school string musicians' accounts of how they spend their practice time, how often they use specific practice strategies, and whether the reported strategies and practice behaviors are associated with students' performance achievement level (as determined by audition). Items addressed on the survey instrument included several general categories of practice, such as percentage of time spent practicing solos, ensemble repertoire, and technical exercises. Additionally we asked how often

these students used specific strategies such as listening to recordings, isolating shifts, and marking half steps, among other strategies.

## **Method**

Participants in the study consisted of 211 middle and high-school string players, ages 11-18. These volunteer students were recruited during a summer music camp in a large school of music in the southeastern United States. Students were members of three string ensembles of graduated ability based on individual auditions held at the beginning of the two-week camp: Chamber (grade 2-3 literature), Philharmonia (grade 4-5 literature), and Symphony (grade 6 literature). The ensembles were approximately the same size, and ranged from 65 to 78 members.

During the two-week camp, the students participated daily in sectionals, rehearsals, theory classes, and chamber music or Irish and Old-time fiddling, as well as individual practice time. Students were exposed to a variety of conductors and teachers throughout the day, as students interacted with four different conductors, two different sectional coaches, and either a fiddling teacher or chamber coach. Students were given the option of electing private lessons in lieu of free time during the lunch hour or early evening.

The mean age of participants was 14.73 (SD = 1.49). String players were from 17 different states, although most (n = 154) were from the state in which the camp was held and neighboring states (n = 32). Over 60 percent of the students were female (n = 130). Violinists comprised approximately 50 percent of the sample (n = 107), with violists numbering 34. There were 50 cellists and 20 double bassists. Students were asked to complete a survey form (see Figure 1), which took approximately 10 minutes to complete.

In addition to descriptive background information, there were two main sections on the questionnaire. The first concerned questions about practice time (individual practice on your string instrument during the school year). These items included: how many days per week, how many minutes per day, and relative percentages spent in the categories of warm-ups/scales, technical exercises, solo repertoire, ensemble repertoire, and other music practice. There was an open-ended question that asked what other types of music were practiced.

The second section of the survey requested participants to use a 10-point rating scale (ranging from never to always) to indicate how often they engaged in the following specific practice behaviors: listening to recordings of music that is practiced, recording themselves practice, using a metronome, varying articulations, varying rhythms, practicing left-hand only, practicing right-hand articulations, isolating shifts, repeating measures or short sections, marking part, and marking half steps. Two open-ended questions were also posed, asking participants to: describe other practice strategies used frequently and give advice to peers about practicing.

## **Results**

Participants reported an average of 5.64 years (SD = 2.61) of string playing experience. Students indicated approximately four years of private instruction (M = 3.98), although the variability was relatively large (SD = 3.12) as a result of the wide range reported (0 to 13 years). We also asked them to report their chair number, but there was uncertainty among respondents regarding whether that meant chair position in the present ensemble (which some did not seem to know) or in their home ensemble; therefore, we were not able to summarize that information reliably.

Table 1 presents a summary of responses to the practice time section of the questionnaire. There were significant differences between the mean ages of the three ensembles, with the Symphony members averaging about 1 year older than the other two groups (15.36 years versus 14.27 and 14.46 years). Similarly the Symphony members had significantly more string playing experience than Chamber and Philharmonia students, as was the case with private instruction. In fact across all comparisons, the magnitude of the differences between ensemble groups in the number of years of private lessons was associated with the largest effect size we found in the study,  $\eta^2_p = .266$ .

**Table 1.** Individual Rating Frequencies According to School Level, Festival Level and Event Type

Survey Item	Chamber	Phil	Symphony	<i>SD</i>	<i>F-ratio</i>	<i>p</i>	$\eta^2_p$
Age (yrs)	14.27	14.46	15.36	~1.4	12.34	<.001	.108
Play Exp. (yrs)	4.10	5.74	6.85	~2.3	23.88	<.001	.187
Private Instruc. (yrs)	1.73	4.28	5.61	2 - 3	37.50	<.001	.266
Practice Time							
Days/week Practice	4.09	4.87	4.82	1.5 - 2	3.81	<.03	.035
Avg. Daily Pract. (min)	56.19	67.53	74.49	31 - 58	2.59	>.05	
Warm-ups/Scales %	15.31	14.03	14.87	8 - 12	0.27	>.50	
Technical Ex. %	14.80	15.56	19.13	~ 12	2.58	>.05	
Solo Repertoire %	24.74	29.79	39.76	17 - 21	11.17	<.001	.097
Ensemble Rep %	33.40	23.47	14.90	13 - 24	19.21	<.001	1.56
Other Practice %	15.20	12.64	8.81*	12 - 17	3.65	<.03	.034

Note: Underline indicates significant difference between means. \*Difference significant only between Symphony and Chamber.

We found no significant differences between the three groups with regard to reported average daily amount of practice time (means ranged from just under an hour to an hour and a quarter), though there was an overall difference between the mean number of days per week that students indicated they had practiced. Students in Philharmonia and Symphony reported practicing nearly five days per week, while averages of Chamber students were just above four days. There were no significant differences in reported percentage of time spent in warm-ups and scale practice (means ranged from approximately 14 to 15% of practice time) or in technical exercises (14.8% to just over 19%).

Students in Symphony indicated that they spent significantly more time practicing solo repertoire (almost 40%) than the Chamber and Philharmonia students (25% and 30%, respectively). Correspondingly, Symphony musicians spent less time in both ensemble repertoire practice (15%) and other music practice (about 9%) than the other two groups. Students in the Chamber group reported about 1/3 of practice time was used for ensemble practice, and about 15 percent for other music practice. Respondents also listed “other” types of music that they practiced during their practice time (see Table 3). Chamber and Philharmonia students listed “Pop” and “Fiddle” styles more frequently than Symphony students. Symphony members listed “Improvisation” and “Chamber” music types more often than the other ensemble members.

Table 2 shows means for the students’ ratings of practice strategy frequency on a 10-point scale (1 indicated “never” and 10 was labeled as “always). As can be seen in the Table, there were no differences in how students in the three groups rated the occurrence of the following strategies: self-recording of practice (means ranged from 3.3 to 4.2 indicating “sometimes”), varying articulations (means were about 6 meaning “often”), varying rhythms (means were about 5.5 or “about half the time”), left-hand only practice (means were between about 4 and 4.5), and right-hand articulation practice (means about 4.0).

**Table 2.** Descriptive Practice Strategy Ratings of Chamber, Philharmonia, and Symphony String Ensembles

Survey Item	Chamber	Phil	Symphony	<i>SD</i>	<i>F-ratio</i>	<i>p</i>	$\eta^2_P$
Listen to recording	5.05	5.81	7.21**	2.2 - 2.9	12.21	<.001	.105
Record yourself	3.28	3.79	4.18	2.1 - 2.4	2.72	>.05	
Use metronome	4.92	5.99	6.37**	2.3 - 2.8	5.82	<.01	.053
Vary articulations	6.17	6.13	5.97	2.5 - 2.8	0.11	>.05	
Vary Rhythms	5.43	5.65	5.55	~ 2.7	0.11	>.05	
LH only practice	4.32	4.49	4.09	2.4 - 2.7	0.44	>.50	

RH articulation	3.86	4.32	4.23	2.3 - 2.4	2.58	>.05	
Isolate shifts	5.85	7.04	7.15	2.0 - 2.5	6.77	<.01	.061
Repeat measures	7.95	8.47	8.76*	1.5 - 2.0	4.02	<.02	.037
Mark part	7.22	7.84	8.25*	2.1 - 2.6	3.47	<.04	.032
Mark half-steps	3.50	4.59	4.99*	2.4 - 3.0	5.33	<.01	.049

Note: Underline indicates significant difference between means. \*Difference significant only between Symphony and Chamber.

\*\*No difference between Chamber and Philharmonia

There was a significant difference between the groups in listening as a strategy. Symphony students reported that they listened to recordings to assist in practice ( $M = 7.21$ ) more often than did the other two groups ( $M = 5.81$  and  $5.05$ ). Symphony students also use a metronome in their practice more often ( $M = 6.37$  or “often”). Other significant differences were found as well: Symphony students indicated more isolation of shifts ( $M = 7.15$ ) than did the Chamber students ( $M = 5.85$ ); more frequent repeating measures or short sections ( $M = 8.76$  or “very frequently” to  $7.95$ ); more part marking in general ( $M = 8.25$  to  $7.22$ ); and more marking of half steps ( $M = 4.99$  or “half the time” to  $3.50$ ). Frequency values reported by students in the Philharmonia group were in-between those of the other two groups in all of these comparisons.

**Table 3.** Frequency of Other Types of Music Practiced

Music Type	Chamber	Philharmonia	Symphony	Total
Pop	11	16	9	36
Fiddle	14	11	9	34
Jazz	5	10	5	20
Improvisation	3	3	7	13
Chamber	1	2	7	10
Rock	5	3	2	10
Church	3	2	1	6
Blues	0	3	0	3
Country	0	2	0	2

Composition	0	2	1	3
Movie	0	0	3	3

## Open Ended Responses

Data obtained from the open-ended responses were coded for emergent themes. Students shared additional practice strategies that they often used, including: slowing the tempo, practicing with a drone, practicing with a tuner, utilizing open strings to check intonation, practicing with the piano, and practicing with a recording. In addition to these strategies, members of the less advanced Chamber Orchestra cited memorization and shadow bowing as strategies that they used during practice.

Students were also given the opportunity to provide practice advice to a peer. The advice shared by the majority of students was either related to specific practice strategies, perspectives on focusing one's mind, or words of encouragement. The most common strategic advice, shared by 21% of the students surveyed, was to practice slowly. One student recommended, "if you are struggling with a section, take it slow and then gradually speed it up." A Symphony violinist shared, "When working on difficult runs, start slowly and work it up to speed gradually. Work sections and then put them together. Don't just run through them all at once." Some students also recommended slow practice with the aid of a metronome. For example, "Play scales slowly with a tuner, drone and metronome. Work on piece slowly with metronome, then work your way up."

The more advanced students cautioned against wasting time on passages already in good shape and suggested that their peers focus on isolating passages that required attention. One Symphony violinist suggested, "Isolate the measures you need help on; running through the entire piece won't help." Another Symphony student wrote, "Don't practice the parts that you have already perfected." A third Symphony student shared, "Target and perfect the specific areas that you need to practice. Avoid overlooking mistakes that you repeatedly make."

A number of students addressed the need for efficiency and consistency when practicing. For example, "Practice consistently even if only for a few minutes." "Practicing in slow small sections creates a better understanding of the part in less time." One of the highest ranked cellists at the camp suggested, "Don't binge practice one day and not play at all the next days. Consistency is very important if you want to improve."

Some students offered practice tips related to attention span and fatigue. "Practice in the mornings before school so that your mind is focused on music all day." Another student suggested, "Don't practice for hours and hours. Cut practice time into 3 different times in the day." Many students believed that shorter intervals with frequent breaks were beneficial. For instance, "short, productive practice is better than long, pointless practice."

Avoiding frustration was a theme shared by students in all three ensembles. "Take your time. If you get frustrated, take a break" shared one advanced violinist. A young Chamber



Orchestra bassist suggested, “Don't get frustrated. The best things start from scratch.” A Philharmonia violinist wrote, “Don't get frustrated with yourself. It only makes the passage or piece harder. Trust me, I know from experience.”

Many students shared words of encouragement, “Don't give up!” “Don't push yourself to the point of exhaustion.” “Relax, concentrate intensely and take frequent breaks.” “At least you are practicing ~ [SIC]. Keep going, don't stop. You may want to quit because you are not getting a passage. Just keep going. You will get it, I promise.” These comments, along with comments related to self-image such as, “Believe in yourself”, “Never doubt yourself”, and “don't ever let anyone tell you that you aren't good enough” were all themes shared by students in all three ensembles.

## **Discussion**

In this study we explored the self-reported practice behaviors of developing string players. We viewed middle and high school string musicians' perceptions of how they spend their practice time, how often they use specific practice strategies, and whether these strategies and practice behaviors are associated with their achievement level. Students were placed by audition into one of three orchestras of graduated ability (Chamber, Philharmonia, and Symphony), and the student survey responses were compared between the three orchestras to explore possible associations with differences in practice behaviors.

Significant differences were found between the three orchestras in regard to the practice strategies used. Students who placed in Symphony, the most advanced orchestra, reported using the following strategies with greater frequency than the other two ensembles: listening to recordings, using a metronome, repeating measures, marking part, and marking half steps. Both Philharmonia students and Symphony students reported isolating shifts with greater frequency than the Chamber students. The various practice strategies used by the more advanced musicians at the camp corroborate previous research that suggests these and other practice strategies have a significant correlation with performance achievement (Burwell & Shipton, 2013; Duke, et al., 2009; Miksza, 2007). Others have found that many of these practice strategies are popular among young musicians (Austin & Berg, 2006; Hallam, 2001; Leon-Guerrero, 2008; McPherson, Davidson, & Pitts, 2000; Miksza, Prichard, & Sorbo, 2012; Rohwer & Polk, 2006). In-service teachers may consider including more listening activities in class and encouraging their students to use a metronome, as these were strategies utilized more frequently by the higher achieving students. Reinforcing deliberate practice with a focus on correct repetition, marking parts during rehearsals, and identifying half steps are all important skills that increase retention and foster musical independence.

Students who placed in the Symphony were slightly older and had more playing experience and private lesson experience than students who placed in Philharmonia and Chamber. In fact, private lesson experience was the factor that produced the largest effect size in our study, that is, private lessons was the variable explaining the greatest amount of variance in

ensemble placement. Others have also found that private lessons have a positive impact on practicing and performance achievement (e.g., Hamann & Frost, 2000). Students placed in Symphony reported spending significantly more time practicing solo repertoire than the Philharmonia and Chamber students. Conversely, Chamber students reported spending the most time practicing ensemble repertoire. A large majority of students in Symphony and Philharmonia had at least one year of private lesson instruction, whereas 23 of the Chamber students had never taken a private lesson. Because many of the chamber students had limited or no private lesson experience, they may not yet have been introduced to solo repertoire, thus their reports noted more practice time on ensemble music. Private lessons may not be a viable option for all students who enroll in orchestra in a public school program. However, opportunities for solo playing, small group playing, and individual instruction appear to benefit students. Inclusion of solo repertoire in the orchestra classroom may motivate students to practice independently and further their skills. When possible, private lessons should be promoted, as the benefits of one on one instruction have been demonstrated in many cases.

Students were asked to share any additional practice strategies that they used with frequency. Many of the strategies reported concerned improving intonation and included: practicing with a drone, practicing with a tuner, utilizing open strings to check intonation, practicing with the piano, and practicing with a recording. These strategies are commonly used by string performers and teachers to improve intonation but were not included on the survey instrument. Future research should include these practice strategies, as good intonation is essential and certainly impacts student achievement and audition placement.

Members of the less advanced Chamber Orchestra cited memorization and shadow bowing as strategies that they used during practice. Neither Symphony nor Philharmonia students reported using these strategies to practice. Shadow bowing in particular is a technique utilized by teachers working with younger, less experienced players, where the students bow in the air away from the instrument as they finger along. This allows for focused mental practice. We did observe the conductors of the Chamber Orchestra utilizing this particular technique during rehearsals, which likely prompted the students to include it on the survey as a strategy for practice.

Students were given the opportunity to provide practice advice to a peer at the end of the survey. The most commonly shared advice was to practice slowly. The more advanced students shared explicit advice to focus practice time on difficult passages, maintain focus, isolate problems, and use repetition. Students from all three orchestras shared words of encouragement and seemed sensitive about moments of frustration and the occasional desire to “give up.” Encouraging students to persevere seems important when considering practice behaviors. Including instructions during rehearsals on how to practice independently, how to identify clear target goals, strategies to assess technical issues, and when to isolate specific skills will greatly increase student success and limit potential frustration.

There are a number of limitations to this study, and results should not be generalized without due cautions. Self-reported practice behaviors are likely inaccurate. Future research

might compare reported practice behaviors to observations of student practice. The students who participated in this study completed the survey near the end of the two-week camp. The instruction delivered by the conductors, sectional coaches, chamber coaches, and private lesson teachers may have prompted some of the students to include practice strategies on the survey that had been suggested to them by one or more of the teachers, regardless of whether they actually used these strategies in their personal practice. Additional limitations of the survey concern aspects of practice that were not included, such as use of practice planning and metastrategies (Miksza, 2007), detailed aspects of developing technique and musicianship, and emotional issues related to practice. It would also be interesting to pursue additional questions related to the role of private lessons in developing strategies and motivations for practice.

Future research investigating the practice habits of string players as they possibly relate to achievement level seems both relevant and consequential. Obviously many questions remain. Information related to specific practice strategies as well as consistency and amount of practice time would be useful for string teachers to incorporate as they attempt to teach students to practice and provide them with practice guidelines. Developing string players would also benefit from this information as they set goals, plan and execute their practice sessions, and improve their skills.

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**Your Instrument:** Violin    Viola    Cello    Bass            (Circle One)    Male    Female

**Age** \_\_\_\_    **Years of String Playing Experience** \_\_\_\_    **Years String Private Lessons** \_\_\_\_

**What State are you from?** \_\_\_\_\_            **What chair number are you** \_\_\_\_\_

**Questions about practice time (during the school year, individual practice on your string instrument):**

Usually how many days a week do you practice? \_\_\_\_\_

What is your average daily amount of practice time (in minutes) \_\_\_\_\_

About what percentage of your practice time do you spend in each of the following categories:

Warm-ups, Scale practice \_\_\_\_\_

Technical Exercises (etudes, shifting) \_\_\_\_\_

Solo Repertoire \_\_\_\_\_

Orchestral/Ensemble Repertoire \_\_\_\_\_

Other Music Practice \_\_\_\_\_

(100%)

What other types of music do you practice on your string instrument? \_\_\_\_\_

\_\_\_\_\_

**Other Practice questions:**

Use the following (1 – 10) rating scale for the next set of items:

1      2      3      4      5      6      7      8      9      10  
never   rarely   sometimes   half the time   often   very frequently   always

How often do you listen to recordings to assist you with the music you're practicing?

\_\_\_\_\_

How often do you record yourself during practice? \_\_\_\_\_

How often do you use a metronome during practice? \_\_\_\_\_

How often do you vary articulations (staccato, slurs etc.) when you practice?

\_\_\_\_\_

How often do you vary rhythms when you practice?

\_\_\_\_\_

How often do you practice with left-hand only? \_\_\_\_\_

How often do you practice right-hand articulation (with open strings)?

\_\_\_\_\_

How often do you isolate shifts? \_\_\_\_\_

How often do you repeat measures or short sections of music? \_\_\_\_\_

How often do you mark your part? \_\_\_\_\_

How often do you mark half-steps in your part? \_\_\_\_\_

Do you use any other practice strategies frequently? If so, please describe: \_\_\_\_\_

\_\_\_\_\_

**If you were teaching your instrument to a peer, what advice would you give them about practicing?**

**Figure 1.** Survey instrument given to middle-and high-school students.