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The Relationship Between Starting Age of Music Instruction and Years of Participation in a String Program Outside School

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It is not uncommon for very young children to start music instruction on string instruments. The Suzuki method is based on the ideas that learning music is similar to learning language and that an early start is beneficial for the development of a love for music as well as musicianship. Indeed, the early years in a child's life are considered critical for the development of certain mental processes and muscle coordination (Suzuki Association of the Americas, n.d.). According to Edwin Gordon's Music Learning Theory, musical aptitude stabilizes after age nine making the period between birth and age nine the most important for increasing musical potential (Gordon Institute for Music Learning, n.d.). Further support for the idea that it is best to start learning an instrument early comes from the analysis of the biographies of musicians (e.g., Manturzewska). Most professional performers start learning to play their instruments early in their lives.

String instruments can fit learners of all ages. The instruments vary in size with the smallest being 1/16 of what is considered a full-sized instrument. This makes it possible for even very young children to play string instruments. In the U.S., it is not uncommon for 4-year-olds to participate in Suzuki instruction (Suzuki Association of the Americas, n.d.). In elementary schools that offer string education, instruction usually starts in the fourth grade (Hartly & Porter; 2009). These practices are all in accordance with the belief that starting early is beneficial for the musical development of children. However, it seems important to consider whether children who start early persist in music instruction. Practicing a musical instrument is a demanding activity that may discourage young learners. In fact, most children who start music instruction discontinue lessons within three years (Waggoner, 2004).

Previous studies have examined the relationship between starting age of formal music instruction and years of study (Duke, Flowers & Wolfe, 1997; Hartley, 1996; Hartley & Porter, 2009). Duke et al. (1997) found that students who took more years of piano lessons had started

instruction at an earlier age than those with fewer years of lessons. In contrast, an earlier study by Hartley (1996) comparing student retention in school music programs, showed no significant difference in the duration of band participation between those who had started lessons in 5th or 6th grade. In other words, an earlier beginning did not yield higher retention rates. Similarly, Kruth (1964) found that the starting grade level was not a significant predictor of dropout rates in secondary school instrumental programs. Contradicting the findings of these previous studies, Hartley and Porter (2009) found that a late start in string instruction was associated with higher retention rates in school orchestra programs. In summary, the results regarding the relationship between starting age of instrumental instruction are conflicting and inconclusive. The purpose of the present study is to investigate this relationship further.

We completed the study with children attending an out-of-school string program associated with a large university. Approximately 250 students aged 4 to 18 enroll in this program and participate in private lessons, musicianship classes, and string ensembles. Two questions guided our study: (1) Is there a relationship between the starting age of music lessons and years of participation in the program? (2) Is there a relationship between selected student demographic characteristics and retention in string programs?

Method

The subjects included in this study were 99 students (female=52, male=47) aged 4 to 16 who registered in the string program at any time between 1998 and 2002 and dropped out within 10 years. Thirty-nine were violin students (female=23, male=16), 17 were viola students (female=10, male=7), 33 studied cello (female=16, male=17), and 10 studied bass (female=3, male=7). We obtained demographic information about each student (sex and date of birth) as well as the instrument of instruction and number of years that the students have participated in the program.

Results

We calculated the starting age of music instruction for each student and established the correlation between this variable and duration of instruction (i.e., number of semester of participation in the program). The correlation between the starting age and years of study was low but significant $r = -0.3498$, $p = 0.0004$. Students who started earlier stayed in the program longer (see Figure 1).

We also calculated the correlation between starting age and years of study separately for female and male students. We found no significant correlation for female students but a moderate correlation for male students $r = -0.4698$, $p = .0009$ (see Figure 2).

Finally, we established correlations between the same variables but for each of the four instruments separately. Only for cello students was the correlation significant $r = -0.5064$, $p = 0.003$. Students who started lessons on cello earlier, remained in the program longer than those who started later.

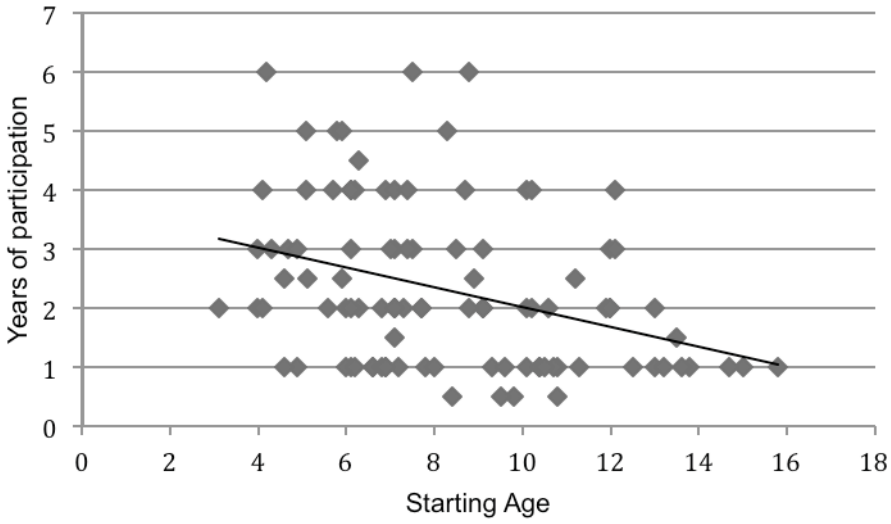

Figure 1. Starting Ages and Years of Participation (All Students)

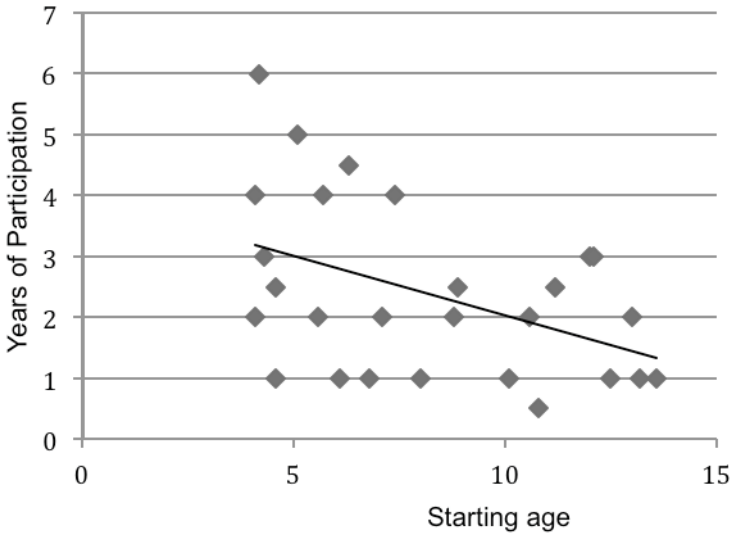

Figure 2. Starting Ages and Years of Participation (Boys)

Discussion

The results of this study show a positive relationship between the starting age of string lessons and the duration of participation in the string program. Although the relationship was not strong, the findings suggest that starting instruction earlier might yield longer participation in out-of-school string programs.

Only 28 out of the 99 students selected stayed in the program after age twelve. This finding shows that most of the students who withdrew from String Project did so before middle school.

Perhaps the transition from elementary to middle school is critical for continuation of music studies. Starting earlier may allow students to take lessons for several years prior to middle school and reach a level of musical independence that would facilitate music making in the future.

The other variable examined in this study was sex. The results show that there was a strong relationship between starting age and the duration of participation in string lessons of male but not female students. This suggests that for boys, starting lessons on string instruments at an earlier age may extend their years of participation in string programs. This finding is particularly interesting considering the results of previous investigations about boys' low positive attitude towards school music programs (Croucher & Reid, 1981; Nolin, 1973) and low likelihood of participating or persisting in piano lessons (Costa-Giomi, 2005; Duke et al., 1997).

The results of the study also show that cello students who entered the program earlier in life, remained in the program longer. It is important to note that the proportion of boys and girls was equal among cello students. In other words, the result that an early start of lessons in cello is associated with longer persistence in the program cannot be attributed to the findings reported earlier regarding the strong correlation between starting age and duration of participation for boys.

Overall, the results of the study provide some evidence supporting the belief that an early start of music lessons may be advantageous for children; starting lessons at an early age may extend involvement in formal music instruction. This seems particularly true for male students and those interested in playing cello. However, this study focused exclusively on the duration of participation in a string program outside school. Further research in other instruments and in other settings is needed to allow the generalization of these results.

References

Costa-Giomi, E. (2005). "I do not want to study piano!" Early predictors of student dropout behavior. *Bulletin of the Council for Research in Music Education*. *161/162*, 57-64.

Croucher, A., & Reid, I. (1981). Pupil attitude changes to junior school activities. *Research in Education*, *26*, 41-48.

Duke, R. A., Flowers, P.J., & Wolfe, D. E. (1997). Children who study piano with excellent teachers in the United States. *Bulletin of the Council for Research in Music Education*, *132*, 51-84.

Gordon Institute for Music Learning (n.d.). Retrieved May 7, 2012, from http://giml.org/

Hartley, L. A. (1996). Influence of starting grade and school organization on enrollment and retention in beginning instrumental music. *Journal of Research in Music Education*, *44*(4), 304-318.

Hartley, L. A. & Porter, A. M. (2009). The influence of beginning instructional grade on string student enrollment, retention, and music performance. *Journal of Research in Music Education*, *56*(4), 370-384.

Kruth, E. C. (1964). *Student Drop-out in Instrumental Music in the Secondary Schools of Oakland, California.* Unpublished doctoral dissertation, Stanford University, Stanford.

Manturzewska, M. (1990). A biographical study of the life-span development of professional musicians. *Psychology of Music, 18* (2), 112-139. doi: 10.1177/0305735690182002

Nolin, H. W. (1973). Attitudinal growth patterns towards elementary school music experiences. *Journal of Research in Music Education*, *21*, 123-134.

Suzuki Association of the Americas (n.d.). Retrieved March 24, 2013, from http://suzukiassociation.org/teachers/twinkler/

Waggoner, T. (2004). New default high school graduation plan: How could this affect your classroom? *Southwestern Musician,* 73(2), 52–54.