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Abstract

The primary purpose of this study was to examine whether any of the six motivational constructs in the expectancy-value model of motivation (i.e., expectancy, ability perceptions, intrinsic interest value, attainment value, social utility value, and cost) would predict whether students intended to have a career teaching classroom music or performing music. Participants included 270 undergraduate students enrolled in music programs at seven major U.S. universities who completed an online questionnaire. Using stepwise multiple regression, the authors documented that attainment value, intrinsic interest value, and expectancy predicted 74% of the variance in whether students intended to choose a career teaching music. They found that expectancy, attainment value, ability perceptions, and intrinsic interest value explained 65% of the variance in whether students intended to choose a career in music performance. Because of the importance of attainment value in predicting students' intentions to teach and the importance of expectancies in predicting their intentions to have a performance career, these two constructs would be obvious choices for teachers and advisors to target if they want to encourage students to pursue these careers.

Keywords

music education, motivation, expectancy, value, career choice, professional identity

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Music teacher recruitment and retention has been cited as a major concern by national associations (e.g., NAFME: The National Association for Music Education; Niermann, 2010, p. 8) and researchers (e.g., Bergee, Coffman, Demorest, Humphreys, & Thornton, 2001). Kimpton (2005) articulated the need for individuals to find ways to improve the “crossroads we find ourselves at” (p. 20) in music education teacher preparation. Furthermore, Woodford (2002) suggested that “music teacher educators might be better positioned to propose needed educational reforms” (p. 676), particularly when the focus is on shaping professional identity in undergraduate music students. Because of the interest in understanding music education students’ beliefs about identity and other motivation-related constructs, researchers have examined various aspects of music education students’ motivations, including (a) motivation characteristics of music education students, (b) career or vocational choices for music education students, and (c) identity formation in music education students. However, investigations that compare the motivational constructs affecting students’ choices about becoming either a music teacher or a music performer are less prevalent in the literature. As a result, we sought to address this need by designing a study to examine some of the motivational constructs that might contribute to music majors’ decisions to choose a career in classroom music teaching or music performance. Our overall aim was to answer the question: What are some of the psychological constructs associated with why students choose music education careers and music performance careers?

Music Teaching as a Career

Research regarding the motivations of music education students was pioneered by Asmus (Asmus, 1986; Asmus & Harrison, 1990; Harrison, Asmus, & Serpe, 1994), and his research revealed that motivation for music, as well as musical aptitude, contributed to achievement in music. Asmus (1986) examined undergraduates through the lens of Attribution Theory to explore the relationships among attributions in general, finding that attributional causes were more important in determining success tendency than success tendency was in determining causal attitudes (p. 83). This was important because it demonstrated that some motivational characteristics of music students differed, depending on their major (i.e., whether they were a music education major or a music therapy major), in the way they attributed others’ ability and their perceptions of success. Later, motivational researchers (e.g., Harrison et al., 1994) found that motivation for music in general did not have specific effects on certain musical skills, such as aural or theoretical skills, but Asmus and Harrison (1990) found that undergraduates reported effort, background, classroom environment, musical ability, and affect for music as some of the reasons that they were successful or unsuccessful with music. These variables may explain undergraduates’ choices to continue with music study but may not fully illustrate the differences in why they might select music performance or music teaching as a future career.

Schmidt, Zdzinski, and Ballard (2006) examined a variety of motivational constructs, such as mastery, intrinsic, individual, cooperative, competitive, ego, approach

success, avoid failure, and personal development competition (p. 142). They found no significant relationship among these variables and students' short- or long-term career goals (p. 151), suggesting that other factors may better discriminate the differences in career goals for music education students. We (Jones & Parkes, 2010) previously studied the motivations of undergraduate music education majors by examining whether students' beliefs about their identification with teaching classroom music, identification with music performance, teaching talent, and/or performance talent predicted the likelihood that they would choose a career in teaching classroom music. We documented that, of these four constructs, identification with teaching classroom music was the only significant predictor of the likelihood that students would pursue a music teaching career. Students gave several reasons for choosing a career in music, including that they enjoyed music, believed that they were good at teaching, believed that a teaching career was useful, and viewed teaching music as part of their identity. The results also supported prior research in regard to the reasons that music education students choose a career in music teaching, including a love of music (Bergee & Demorest, 2003; Gillespie & Hamann, 1999; Hellman, 2008; Kvet & Watkins, 1992; Madsen & Kelly, 2002; Thornton & Bergee, 2008), a love of teaching (Gillespie & Hamann, 1999; Hellman, 2008; Thornton & Bergee, 2008), and/or an influential role model who had supported their decision to become a music teacher (Bergee, 1992; Bergee & Demorest, 2003; Madsen & Kelly, 2002).

Other researchers also have tried to define the influences on career choice in music education (Allen, 2003; Rickels et al., 2010). Allen (2003) reported that whereas music performance students lost their vocational identity (i.e., a "clear and stable picture of one's goals, interests, and talents," p. 14), music education students gained in vocational identity over the 3 years they were enrolled in a music program. Allen (2003) attributed the cause for this to be students' exposures to field experiences. Rickels et al. (2010), in contrast, quantified the types of experiences that prospective music education majors had undertaken at the time of their college audition. Experiences such as conducting performing groups, rehearsing groups and sectionals, and giving private lessons seemed to be important in students' reasons for wanting to become teachers. These reasons were congruent with other research, in which students expressed their motivations for wanting to become music teachers to include "wanting to teach others to make music or love music" (p. 303). Interestingly, Rickels et al. drew a focus to the importance of teaching private lessons and that private lesson teachers were influential in students' decisions to become teachers. The role of the applied studio also was found to be important, and perhaps this is why some students also choose to become performers, in the hope that they also will become applied studio teachers, despite little training in how actually to teach in that setting (Rickels et al., 2010, p. 303).

It is clear that undergraduate music education students need both musician and teacher identities to be successful teachers, yet it remains unclear as to how their formation of these identities motivates them to choose a career in music teaching or music performance. In attempting to answer the question of why students become teachers or performers, some researchers have suggested that students have been

socialized initially to develop identities primarily as musicians and less as teachers (see Woodford, 2002, p. 681, for discussion). We (Jones & Parkes, 2010) found that this was not the case for a group of students who self-selected as being someone who was considering a career in music education. These students reported levels of identification with teaching classroom music that were very high and statistically higher than their level of identification with music performance. Pellegrino (2009) explored the connections between performer identities and teacher identities in her literature review and suggested that there might be conflict between the two identities (p. 47). Isbell (2008) recently found that occupational identity consisted of three constructs (musician identity, self-perceived teacher identity, and teacher identity as perceived by others). Both Isbell and Pellegrino supported the concept that music education students carry an idea of who they are as musicians and as teachers. These perceptions may or may not be mutually exclusive; therefore, it becomes worthwhile to examine the comparative differences between music education students and music performance students.

Music Performance as a Career

In determining why some students choose careers in music education, it also might be useful to examine why other students do *not* choose music education careers and, instead, choose music performance careers. With respect to psychological constructs, self-efficacy has been found to be a key predictor of performance achievement for music performance students (McPherson & McCormick, 2006). Goal orientation and implicit theory of ability are also beliefs that have been documented as being important because they impact music students' practice behavior (Smith, 2005). In an interesting cross-cultural examination of motivations for learning music performance, Brand (2001) found that American music students tended to rely more on extrinsic motivation than did Chinese music students when compared on their surface motives and strategies. Chinese music students used less rote learning, an example of typical surface strategy, than did American music students.

In determining the reasons that music students might pursue a career in music performance, we (Parkes & Jones, 2011) previously have documented that music performance students choose careers in performance because they enjoyed music, believed that they had the ability to succeed, found music performance useful, and viewed themselves as musicians at heart. We compared these reasons with the reasons that music education students had given, as cited in previous literature, and found that some reasons were similar, such as love for music and connecting with people. In one study that compared music performance and music education students' attitudes toward teaching private music lessons, Fredrickson (2007) documented differences and suggested that music performance students should have access to more instruction about pedagogy in the private studio. Fredrickson's work demonstrated that music performance students thought differently about teaching from how music education students thought.

Expectancy-Value Model of Motivation

To understand students' beliefs and motivations related to music career choice, the expectancy-value model of motivation could be particularly useful, given that this model has been used to predict students' choices in other fields such as mathematics (Meece, Wigfield, & Eccles, 1990) and engineering (Jones, Paretti, Hein, & Knott, 2010). The expectancy-value model of motivation (Eccles et al., 1983; Eccles, Adler, & Meece, 1984; Eccles & Wigfield, 1995; Wigfield, 1994; Wigfield & Eccles, 1992) expands on the expectancy and value constructs initially developed by Tolman (1932), Lewin (1938), and Atkinson (1957, 1966) and posits that expectancies and values influence students' choices, performance, effort, and persistence. Eccles and her colleagues have tested their model empirically and found that students' expectancy for success related strongly to their performance on a task, whereas their values related strongly to their intentions and choice of activities (Eccles, 1984a, 1984b; Eccles et al., 1983; Meece et al., 1990). Thus, the power of the model is derived from the fact that students' achievement and motivation (e.g., their choice to engage and persist in something) can be assessed by examining their beliefs about their ability perceptions and values. For instance, Meece et al. (1990) found that junior high school students' performance expectancies predicted subsequent grades, whereas their perceived importance of math predicted their future course enrollment intentions. Expectancy (i.e., self-efficacy) has also been found to be the most important predictor of performance achievement for music performance students (McPherson & McCormick, 2006).

Eccles and Wigfield (1995) have used factor analytic techniques to demonstrate empirically that achievement task value could be separated into at least three constructs: intrinsic interest value, attainment value, and extrinsic utility value. Intrinsic interest value is defined as either the enjoyment experienced from performing an activity or the subjective interest an individual has in a subject. Individuals who have a high intrinsic interest value are more likely to engage in the task, persist longer, and be intrinsically motivated to perform the task (Wigfield & Eccles, 1992). Attainment value is defined as the importance of doing well on a task. The extrinsic utility value of a task is the usefulness of the task in terms of an individual's future goals. Although Eccles and Wigfield (1995) identified three separate constructs within the "value" construct, they also found positive correlations among these three constructs. Moreover, they found that the task value constructs were related positively and moderately strongly to students' expectancies/ability perceptions, with the weakest correlation occurring between extrinsic utility value and expectancies/ability perceptions. They explained that the correlation between expectancy/ability perceptions and extrinsic utility value should be weaker than the correlations between expectancy/ability perceptions and intrinsic interest value and attainment value because utility is determined by its links to goals and activities that are extrinsic to the task and, thus, can be influenced by a wider range of variables.

Research Questions

The goal of this study was to examine whether any of the six motivational constructs in the expectancy-value model of motivation (i.e., expectancy, ability, intrinsic interest value, attainment value, social utility value, and cost) would predict whether students intend to have a career teaching classroom music or performing music. We had two primary research questions: (1) What are the relationships among the six motivational constructs in the expectancy-value model of motivation and students' career intentions in classroom music education and music performance? (2) Which of the six motivational constructs in the expectancy-value model of motivation best predicts the likelihood of a student choosing a career in classroom music teaching and music performance?

These research questions are part of a larger study aimed at using different theoretical frameworks and methodologies to examine why undergraduate students choose a career in classroom music teaching or music performance. In a prior article (Jones & Parkes, 2010), we reported on our use of a mixed methods approach to investigate why undergraduate music students chose a career in teaching classroom music using "domain identification" (Osborne, 1997a, 1997b; Osborne & Jones, 2011) as our theoretical framework. In another project (Parkes & Jones, 2011), we used a qualitative methodology to identify the reasons that music students provided for why they were planning on pursuing a career in music performance. We designed the present research to complement these two studies by more directly comparing the motivations of students considering classroom music teaching and music performance using the expectancy-value model as our theoretical framework.

Method

Participants and Procedure

The participants and procedure are similar to what we reported in Jones and Parkes (2010), but we briefly summarize them here and highlight the differences. Students enrolled in music performance and music education programs at six large public state universities and one large private university participated in this study. The heads of the music departments at these seven universities sent an e-mail to their music performance and music education students that asked them to complete an anonymous online questionnaire. Although we could not confirm that all of their students received this e-mail, we calculated that a total of 1,358 students were solicited. We received completed questionnaires from 270 students, resulting in a 20% response rate. In the data analysis for our prior articles, we only included some of these 270 students (i.e., 143 students who were considering a career in music education in the Jones and Parkes, 2010, article and 91 students who were considering a career in music performance in the Parkes and Jones, 2011, article). However, in the present study, we included all 270 students and found that a little more than half of the students were

female (55.4%), most of the students were White/Caucasian (88.1%), 4.1% were Hispanic, 3.0% were Asian or Pacific Islander, 2.2% were Black or African American, and 2.6% were of another race or ethnicity. Based on our general knowledge of music students at these schools, our sample seems to be reasonably representative of music students in the United States and is similar to what Kelly (2003) documented. He reported survey results from four large institutions with music education majors ($n = 406$) where most participants were female (59%), 84% were White/Caucasian, 3% were Hispanic, 3% were Asian, 6% were African American, and 4% were of other ethnicities (p. 45). Students in our study were spread somewhat evenly across academic class levels with 29.4% freshmen, 23.8% sophomores, 20.4% juniors, and 26.4% seniors participating. The representation of participants by state was as follows (the percentages represent the number of students out of the total 270 participants): 48 students (17.8%) from the two Virginia institutions, 43 (15.9%) students from the North Carolina institution, 41 students (15.2%) from the Pennsylvania institution, 38 students (14.1%) from the Illinois institution, 36 students (13.3%) from the West Virginia institution, 34 students (12.6%) from the Texas institution, and 30 students (11.1%) from the Florida institution.

Questionnaire

Participants completed an online questionnaire that asked students about their beliefs about music performance and music education. In this article, we discuss the results of 28 Likert-type items that asked students about their perceptions related to the constructs in the expectancy-value model of motivation and their career intentions. We have not reported the results of the 24 items composing the Expectancy-Value Questionnaire for Teaching Classroom Music and Music Performance in our prior publications; however, in Jones and Parkes (2010), we did report the results of the Career in Teaching Classroom Music and Career in Music Performance instruments for a subsample ($n = 143$) of the sample used in this study. Items from the Expectancy-Value Questionnaire and Career instruments were combined into the seven instruments that are described in the remainder of this section. The seven instruments were used for both teaching classroom music and music performance by using the phrase “teaching classroom music” or “music performance” in each of the items.

Expectancy-Value Questionnaire for Teaching Classroom Music and Music Performance. We designed this questionnaire to measure the six constructs discussed previously in the expectancy-value model of motivation (Eccles et al., 1983; Eccles & Wigfield, 1995), including expectancy beliefs, ability beliefs, intrinsic interest value, social utility value, attainment value, and cost. In general, we designed the items to be similar in format and content to those designed by Eccles and Wigfield (1995), because their items have been shown to have excellent face, convergent, and discriminant validity, as well as strong psychometric properties (Eccles et al., 1983; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002). Because the scales used by Eccles and Wigfield (1995)

measured students' perceptions in the domain of mathematics, we changed the word *mathematics* in each item to something similar to "teaching classroom music" and "music performance" and reworded the items as needed for them to make sense within the context of being a classroom music teacher or music performer.

Because the extrinsic utility items from Eccles and Wigfield (1995) did not make sense in the context of becoming a classroom music teacher or music performer, we focused these items on social utility value similar to the "make social contribution" construct used by Watt and Richardson (2007). These items measured the extent to which students believed that classroom music teachers and music performers contribute to society in a meaningful way. In addition, we developed two items to measure "cost" because it is part of the expectancy-value model (Eccles et al., 1983; Wigfield & Eccles, 1992) even though it has not been tested empirically to the same extent as the other constructs. To assess cost, we developed one item to measure the perceived amount of effort required to be a good classroom music teacher (or music performer) and another to measure an anticipated emotional state (i.e., stress) of being a music teacher or a music performer, both of which are considered aspects of cost (Schunk, Pintrich, & Meece, 2008).

Each of the six constructs was measured with two 7-point Likert-type items for both career in teaching music and performing career. Example items are as follows (the first Cronbach's alpha reported is for music teaching career and the second alpha is for music performance): for expectancy, "If you were to become a classroom music teacher, how well would you expect to do?" (*very poorly, very well*; $\alpha = .81, .85$); for ability, "How would you rate your ability to teach classroom music?" (*not at all good, very good*; $\alpha = .89, .90$); for intrinsic interest value, "How much do you like teaching classroom music?" (*not very much, very much*; $\alpha = .92, .87$); for attainment value, "How important is it to you to do well in music education?" (*not at all important, very important*; $\alpha = .91, .87$); for social utility value, "How much do classroom music teachers give back to society?" (*not much at all, very much*; $\alpha = .88, .89$); and for cost, "Is the amount of effort it takes to do well at teaching classroom music worthwhile to you?" (*not very worthwhile, very worthwhile*; $\alpha = .89, .82$).

Career in Teaching Classroom Music and Career in Music Performance instruments. These instruments measured the likelihood that a student's career would be in teaching classroom music (two items) and music performance (two items). These are the same instruments reported in Jones and Parkes (2010) and the Cronbach alpha values were very high ($\alpha = .97$ for teaching classroom music; $\alpha = .97$ for music performance). Items were rated on 7-point Likert-type scales and an example item is "How likely is it that your eventual career after graduation will be in teaching classroom music?" (*not at all likely, very likely*).

Analysis

We analyzed the data using the Statistical Package for Social Sciences (SPSS) 14.0 program. For reporting purposes, the critical level for statistical significance (alpha)

was set at .05. Descriptive statistics were computed for all of the questionnaire items. We conducted several different types of analyses, including correlational, analysis of variance (ANOVA), and linear regression. We examined the tolerance values as measures of collinearity for the regression analyses. A small tolerance value can be problematic because it indicates that the variable is highly collinear with the other predictor variables, which can cause problems in estimating the regression coefficients. We considered tolerance values of less than 0.25 as indicating a problem with collinearity (Miles & Shevlin, 2004) but found that none of the tolerance values were less than this value for any of our analyses.

Results

Because the sample included undergraduates enrolled in both music education programs and music performance programs, we separated those who intended to pursue a career in teaching classroom music from those who did not. To do so, we divided the students into one of three groups based on their responses to the Career in Teaching Classroom Music instrument. The average scores on this instrument ranged from 1 (indicating that they were not at all likely to have a career in teaching classroom music) to 7 (indicating that they were very likely to have a career in teaching classroom music). We divided the 7-point scale into three relatively equal parts to create three groups of students: (1) those who were not likely to select a career teaching music ($n = 58$; scores ranged from 1.0 to 2.5), (2) those who were somewhat likely to choose a career teaching music ($n = 58$; scores ranged from 3.0 to 5.0), and (3) those who were most likely to enter a career teaching music ($n = 154$; scores ranged from 5.5 to 7.0). For the analyses related to music performance, we followed the same procedure and divided the students based on their responses to the Career in Music Performance instrument. We obtained three groups of students: (1) those who were not likely to select a career in music performance ($n = 123$; scores ranged from 1.0 to 2.5), (2) those who were somewhat likely to choose a career in music performance ($n = 74$; scores ranged from 3.0 to 5.0), and (3) those who were most likely to enter a career in music performance ($n = 73$; scores ranged from 5.5 to 7.0).

We conducted the analysis for teaching classroom music separately from the analysis related to music performance; therefore, we did not have to categorize a student as either a music educator or a music performer. Rather, by conducting separate analyses, students were placed on a continuum ranging from low to high likelihood of a career teaching music and another continuum ranging from low to high likelihood of a career in music performance based on their self-reported responses. Although there was a statistically significant negative correlation between the two scales ($r = -.42, p \leq .01$), reporting a high value on one scale did not necessarily indicate that the student reported a low value on the other scale. We analyzed the data in this manner because we believed that it was realistic for some students to report a high value on one scale and a fairly high value on the other scale. As an example, a student could strongly agree that her eventual career would be in teaching classroom music, yet also agree to some extent

that her career would involve music performances that she engaged in outside of her “regular” job.

Examining Relationships Among Motivational Constructs and Career Intentions

Our first research question was: What are the relationships among the six motivational constructs in the expectancy-value model of motivation (i.e., expectancy, ability, intrinsic interest value, attainment value, social utility value, and cost) and students’ career intentions in music education and music performance? To answer this question, we conducted several different analyses that are described in this section.

To determine whether undergraduate music students rated one or more of the six motivational constructs higher or lower than the others, we conducted six repeated measures ANOVAs (for the low, moderate, and high likelihood groups for both teaching music and performing music) followed by post hoc tests of pairwise comparisons (using a Bonferroni adjustment for multiple comparisons). When the assumption of sphericity could not be maintained for the post hoc tests, we corrected for the lack of sphericity by using the Greenhouse-Geisser epsilon, which resulted in a more conservative test of significance through the use of smaller degrees of freedom (Shannon & Davenport, 2001).

For each of the three groups representing likelihood of a career teaching music, we found a significant statistical difference among several of the motivational constructs (see Table 1; this analysis involved comparing the means in one column at a time). The post hoc tests revealed that, for the students with a low likelihood of a career teaching music, social utility value was significantly higher than expectancy, which was significantly higher than the other four constructs, $F(2.9, 167.1) = 67.30, p < .001, \eta^2_p = 0.54$. For the students with a moderate likelihood of a career teaching music, social utility value was also significantly higher than the other constructs, $F(3.5, 199.8) = 30.62, p < .001, \eta^2_p = 0.35$. For the students with a high likelihood of pursuing a career teaching music, social utility value and attainment value were significantly higher than intrinsic interest value and cost, which were significantly higher than expectancy, which was significantly higher than their ability perceptions, $F(4.1, 632.3) = 69.59, p < .001, \eta^2_p = 0.31$.

We also documented a significant statistical difference among several of the motivational constructs for the three groups of students by likelihood of a career in music performance. The post hoc tests showed that, for the students with a low likelihood of a music performing career, intrinsic interest value, attainment value, and social utility value were significantly higher than cost, which was significantly higher than ability, which was significantly higher than expectancy, $F(3.7, 446.5) = 56.09, p < .001, \eta^2_p = 0.32$. For the students with a moderate likelihood of a music performing career, intrinsic interest value and attainment value were significantly higher than the other constructs, $F(3.8, 275.2) = 48.11, p < .001, \eta^2_p = 0.40$. For the students with a high likelihood of pursuing a performance career, intrinsic interest value and attainment value were significantly higher than cost, which was significantly higher than social

Table 1. Comparisons of Mean Values for Each Motivational Construct by Likelihood of a Career in Teaching Music and Likelihood of a Career in Performing Music

Motivational construct	Likelihood of a career in teaching music			ANOVA		
	Low <i>M (SD)</i>	Moderate <i>M (SD)</i>	High <i>M (SD)</i>	<i>F</i> (2, 267)	<i>p</i>	η^2_p
Expectancy	3.99 (1.34)	5.13 (0.86)	6.07 (0.74)	110.38	<.001	.45
Ability	3.42 (1.34)	4.44 (1.00)	5.68 (0.92)	106.23	<.001	.44
Intrinsic interest value	2.92 (1.25)	4.68 (1.42)	6.42 (0.82)	236.46	<.001	.64
Attainment value	3.19 (1.43)	5.14 (1.47)	6.75 (0.54)	258.53	<.001	.66
Social utility value	5.97 (1.38)	6.43 ^a (0.78)	6.65 ^a (0.59)	13.28	<.001	.09
Cost	2.87 (1.48)	4.83 (1.33)	6.35 (0.83)	210.57	<.001	.61
	Likelihood of a career in performing music			ANOVA		
Expectancy	3.41 (1.14)	4.72 (0.84)	5.65 (0.78)	120.77	<.001	.48
Ability	3.80 (1.11)	5.01 (1.02)	5.93 (0.82)	104.17	<.001	.43
Intrinsic interest value	4.96 (1.46)	6.29 (0.82)	6.93 (0.32)	82.05	<.001	.38
Attainment value	5.05 (1.33)	6.33 (0.91)	6.94 (0.21)	86.76	<.001	.39
Social utility value	5.13 (1.46)	5.62 (1.30)	6.15 (0.88)	14.61	<.001	.09
Cost	4.33 (1.55)	5.68 (1.09)	6.62 (0.62)	82.43	<.001	.38

Note: All items were rated on a 7-point Likert-type scale. Means with an “a” superscript do not differ significantly at $p < .05$. ANOVA = analysis of variance.

utility value, which was significantly higher than ability, which was significantly higher than their expectancy value, $F(3.8, 275.5) = 62.30, p < .001, \eta^2_p = 0.46$.

Another question we asked was, Do students’ beliefs related to the six motivational constructs differ based on whether they intend to choose a career in teaching classroom music or in music performance? We used the General Linear Model to conduct a univariate analysis of variance to compare the differences among means of the three groups based on the Career in Teaching Classroom Music groupings, and another to compare the three groups derived from the Career in Music Performance instrument. The results are presented in Table 1 and represent the extent to which there were statistical differences among the three means in any one row. Students who reported the highest likelihood of choosing a career teaching music, or performing music, were

characterized by the highest values on all six motivational constructs (except for social utility value for teaching music, which was not statistically different for students with a high or moderate likelihood of a career teaching music). Similarly, means for students who reported the lowest likelihood of choosing a career teaching music or performing music were associated with the lowest values on the six motivational constructs.

To examine the extent of the correlations among the motivational constructs and the career variables, we computed correlation coefficients for all of the six motivational constructs and the career variables (see Table 2). We found that all of the variables were correlated significantly, except that social utility value for teaching was not correlated significantly to a career in performance and social utility value for performance was not correlated significantly to a career in teaching. The correlations between social utility value and the other variables (ranging from .17 to .32 for teaching and from .26 to .47 for performance) were not as large as the correlations between the other variables (ranging from .67 to .88 for teaching and from .55 to .79 for performance).

Predicting Likelihood of a Career in Teaching and Performance

Our second research question was, Which of the six motivational constructs in the expectancy-value model of motivation (i.e., expectancy, ability, intrinsic interest value, attainment value, social utility value, and cost) best predicts the likelihood of a student choosing a career in music teaching and music performance? To address this research question, we used stepwise multiple regression, for two reasons. First, as is indicated by the high correlations between many of the variables (see Table 2), many of the predictor variables are highly related. As a result, standard multiple regression, which measures only the unique contribution of each independent variable, would reduce the importance of any one variable that was correlated highly with another.

Table 2. Intercorrelations Among Variables

Variable	1	2	3	4	5	6	7	8
1. Expectancy	—	.77	.55	.56	.26	.60	-.22	.74
2. Ability	.82	—	.62	.58	.35	.62	-.24	.70
3. Intrinsic interest value	.71	.75	—	.78	.46	.70	-.28	.65
4. Attainment value	.69	.67	.86	—	.47	.79	-.26	.66
5. Social utility value	.24	.17**	.29	.30	—	.45	-.10	.34
6. Cost	.71	.70	.88	.87	.28	—	-.24	.66
7. Teaching music career	.69	.67	.81	.83	.32	.80	—	-.42
8. Performance career	-.35	-.42	-.48	-.47	-.02	-.45	-.42	—

Note: Pearson correlation coefficients below the diagonal are for the variables related to teaching, and coefficients above the diagonal are for the variables related to performance.

** $p \leq .01$. $p \leq .001$ for values in bold.

Stepwise regression eliminates this problem by adding variables one at a time starting with the one that correlates most strongly with the dependent variable. Another reason that we used stepwise regression was that, ultimately, we are interested in determining which predictor variable(s) could be targeted for interventions based on the greatest amount of variance explained in the dependent variable (i.e., likelihood of a career in teaching and performance). Using stepwise regression allowed us to identify the variable(s) that best predicted the dependent variable given the presence of the other predictor variables.

We set the entry probability of F at .05 and the removal probability of F at .10 for the stepwise multiple regressions. The results of the regressions are presented in Table 3. Of the six variables entered as predictors, only three were significant predictors of likelihood of a career teaching music. Attainment value predicted the most variance (69%) in whether students believed that they were likely to pursue a career in teaching classroom music. Intrinsic interest value predicted an additional 4% of the variance in Step 2 and expectancy predicted another 1% of the variance in Step 3. Overall, these three variables accounted for 74% of the variance in the dependent variable.

Four of the six variables were significant predictors of the likelihood of a career in music performance. Expectancy predicted the most variance (54%) in whether students believed that they were likely to pursue a career in music performance. Attainment value predicted an additional 8% of the variance in Step 2, ability predicted another 1% of the variance in Step 3, and intrinsic interest value accounted for about 1% of the variance in Step 4. Overall, these variables accounted for 65% of the variance in performance career.

Discussion

Relationships Among Variables

One of the purposes of this study was to document the relationships among the constructs in the expectancy-value model of motivation and students' career intentions in music education and music performance. Social utility value for teaching music was the highest rated of the expectancy-value model constructs for teaching music (as determined by comparing the values vertically in each column in Table 1; note that the attainment value was not statistically different from the social utility value for the highest group). This indicates that even students who were not likely to have a career teaching music (i.e., the low likelihood group) believed that music teachers provided an important service to society and rated this value higher than the other expectancy- and value-related constructs. For music performance, intrinsic interest value and attainment value were the highest rated constructs (in addition to social utility value for the low likelihood group) for all groups. The fact that intrinsic interest value was rated higher indicates that students in all groups were interested in and enjoyed music performance. The high ratings for attainment value suggest that students in all groups also believed that being good at music performance was important to them, even students who were not likely to have a career in music performance. This finding is

Table 3. Stepwise Regression Analyses: Predictors of a Teaching Career and Predictors of a Performance Career

Step and predictor variable	ΔR^2	R^2	df	ΔF	B	$SE B$	β^a	t	p
Teaching career									
Step 1	.69	.69	268	610.80***					
Attainment value					1.01	.04	.83	24.71	<.001
Step 2	.04	.73	267	35.55***					
Attainment value					.62	.08	.51	8.20	<.001
Intrinsic interest value					.45	.08	.37	5.96	<.001
Step 3	.01	.74	266	11.85***					
Attainment value					.56	.08	.46	7.38	<.001
Intrinsic interest value					.36	.08	.30	4.69	<.001
Expectancy					.27	.08	.16	3.44	\leq .001
Performance career									
Step 1	.54	.54	268	316.62***					
Expectancy					1.15	.06	.73	17.79	<.001
Step 2	.08	.63	267	63.68***					
Expectancy					.84	.07	.53	11.86	<.001
Attainment value					.58	.07	.35	7.9	<.001
Step 3	.01	.64	266	13.89***					
Expectancy					.61	.09	.38	6.60	<.001
Attainment value					.51	.07	.31	6.82	<.001
Ability					.35	.09	.22	3.72	\leq .001
Step 4	.01	.65		5.90*					
Expectancy					.61	.09	.39	6.70	<.001
Attainment value					.35	.09	.21	3.66	<.001
Ability					.28	.09	.18	2.97	<.01
Intrinsic interest value					.23	.09	.14	2.42	<.05

^aStandardized coefficient β .

* $p < .05$. *** $p \leq .001$.

logical given that music teachers also are expected to be competent in music performance.

The fact that all of the constructs in the expectancy-value model were correlated statistically (see Table 2) is not unexpected given that other researchers also have documented correlations between the expectancy-value model constructs in domains such as mathematics (Eccles & Wigfield, 1995) and engineering (Jones et al., 2010). The implication is that the relationships between these constructs are generalizable to students in music education and performance programs.

Other correlations we found noteworthy were that the likelihood of a teaching career was correlated negatively with the likelihood of a performance career. This finding makes sense given that students would likely choose a career in either teaching or performance, but not both. We would expect, however, that some students would plan to teach music and be involved in performance to some extent (or vice versa). All of the teaching expectancy- and value-related constructs were correlated positively with likelihood of a teaching career and negatively correlated with the likelihood of a performance career (except for social utility value). Similarly, all of the performance expectancy- and value-related constructs were correlated positively with likelihood of a performance career and negatively correlated with the likelihood of a teaching career (except for social utility value). It is important to note that the social utility value items were the only items that did not ask students about themselves; instead, these items asked students about whether they thought that either classroom music teachers or music performers were useful to society. Because of the wording difference for this construct, it is not surprising that the correlations between social utility value and the career variables were lower than for the other variables and the career variables.

Predicting Likelihood of a Teaching and Performance Career

A main purpose of this study was to determine which motivational constructs were related to whether students would likely choose a career in classroom music teaching or music performance. Students who had higher expectancy-related (i.e., expectancy and ability) and value-related (i.e., intrinsic interest value, attainment value, social utility value, and cost) beliefs for teaching music were more likely to indicate that they intended to pursue a career in teaching music than those with lower expectancy- and value-related beliefs. Similarly, students who had higher expectancy- and value-related beliefs for music performance were more likely to indicate that they intend to pursue a career performing music than those with lower expectancy- and value-related beliefs. These findings are consistent with the expectancy-value model (Eccles et al., 1983), which predicts that students' choices are affected directly by both expectancies and values. The results presented in Table 1 are particularly striking because, in all cases but one, students with a high likelihood of a career in either teaching or performing had higher ratings on the motivation constructs than did those who reported a moderate likelihood. Further, in all cases, students with a moderate likelihood of a career in either teaching or performing reported higher ratings on the motivation constructs than those with a low likelihood of a career in teaching or performing. Therefore, there appears to be an incremental effect whereby the higher students rated their expectancies and values, the more likely they were to indicate that they would have a career in that domain (either teaching or performing).

Although both expectancy- and value-related ratings were higher in the domain in which students intended to have a career, expectancy- and value-related ratings were not equally as effective at predicting students' career intentions. Attainment value was the best predictor of whether students planned on choosing music teaching as a career,

and expectancy was the best predictor of whether students planned on choosing a performance career. In other words, students who held stronger beliefs that teaching music was important to them were more likely to indicate that they intended to have a career teaching music. Students who held stronger beliefs that they would do well in performance were more likely to indicate that they intended to have a career in music performance. The implications are that students' beliefs about the importance of teaching music and expectancies for performance are critical to students' career choices (see the Implications section for further discussion of this point).

Prior studies generally have documented that values are related more strongly to students' intentions and choice of activities than expectancies (e.g., Eccles, 1984a, 1984b; Eccles et al., 1983; Jones et al., 2010; Meece et al., 1990). In the present study, it was the case that a value (i.e., attainment value) was the best predictor for a teaching career, which is consistent with prior studies. However, expectancy, not a value, was the best predictor of a performance career. This finding is interesting in that it suggests that there is something different about a performance career from some other types of careers because expectancy beliefs are so critical to those who choose it.

We speculate that there are at least two reasons that expectancies are important to those choosing a performance career. First, the primary, and often the sole, criterion for advancement in a performance career is the musician's performance ability. It is, therefore, not practical for students who believe that they do not have the ability (i.e., they have low expectancies for performance) to plan on a career in music performance. Second, it is easier in music performance than in some professions to assess one's abilities relative to others. For example, based on their performance, music students are chosen to participate in music groups and ranked within groups from first chair to last, or auditioned for placement into ensembles. These assessments give students ongoing feedback as to their performance abilities. In contrast, in music teaching, students are not as easily ranked according to their music teaching ability. Students do receive grades in teaching methods courses, which is a type of ranking, but students might believe that their grades are subjected to more influences outside of their control than in music performance (e.g., their instructor was unfair). Or, students might believe that with more effort (e.g., if they had more time to study), they could improve their grades in teaching methods courses. Moreover, most students likely believe that teaching skills can be learned at the college level and beyond, whereas by the time they are in college, students with low music performance skills likely will never catch up with those who have much higher skills.

We also propose a few reasons that attainment value is critical to students who intend to choose a career teaching music. It is believed fairly widely that teaching is not a lucrative profession and that students must really want to do it to choose it for their profession. In addition, many students probably believe that the level of their teaching skills is not as important as the fact that they believe that teaching music is important. From this perspective, it seems logical that students who reported that teaching music was important to them were more likely to report that they intended to choose it as a career.

Limitations

Because the response rate was only 20%, our participants might not be representative of undergraduate music students, which could limit the generalizability of our findings. We do not know how the participant's perceptions might have differed from the non-participant's perceptions. However, we have no reason to believe that the participants were different from the nonparticipants in any systematic manner that would influence the results of this study. Another limitation is that we measured the constructs using instruments consisting of two items. The reliability of the measurements might have been increased if we had used instruments with more items. However, we based our instrument items on those used by Eccles and her colleagues, who typically have used two- and three-item instruments to measure the expectancy and value constructs (e.g., Eccles & Wigfield, 1995). An advantage of using fewer items per instrument is that it increases the chance of unidimensional measurement and decreases the chance that multiple constructs will emerge (Judd, Jessor, & Donovan, 1986).

Implications

Teaching and Advising Implications

Because of the importance of attainment value in predicting students' intentions to teach and the importance of expectancies in predicting intentions to have a performance career, these two constructs are obvious candidates for teachers and advisors to target if they want to encourage students to pursue these careers. In other words, to encourage students to consider seriously a teaching career, it would be important to know whether teaching is important to them and that they value teaching. If not, it could be useful to demonstrate to them the importance of teaching music.

Using the MUSIC Model of Academic Motivation (Jones, 2009), teachers and advisors could increase students' attainment value (called "individual interest" by Jones, 2009) in teaching music by (a) empowering students by providing opportunities for them to have some control during their teaching experiences, (b) showing students how teaching can be useful to their life's goals, (c) ensuring that students believe that they can be successful as a teacher, (d) showing students that teaching is interesting, and (e) ensuring that students recognize the caring interpersonal relationships that can be developed between students and teachers (because these types of relationships can be very satisfying). Most of these suggestions require that students participate in teaching experiences, which is consistent with what others have suggested for music education students (e.g., Allen, 2003; Woodford, 2002). As one example, students could be exposed early in music teacher education programs to a teaching experience. This could be designed and integrated into the first-year experience to help students decide whether being a teacher is important to them. These types of experiences might assist students in declaring a music major earlier or to being more open to developing a teacher identity (Isbell, 2008). It also may be a good experience for students in

helping them decide that teaching is not the career they want to pursue. They might believe that teaching music is important but that it is not important for them personally to be a music teacher (i.e., it is not a major part of their identity).

To encourage students to choose a career in music performance, teachers and advisors should increase students' expectancies for success in music performance. Because expectancy for success is conceptually similar to self-efficacy, one could use the well-documented ways of increasing self-efficacy as a means to increase students' expectancies for success in music performance. Beliefs about self-efficacy are based in large part on information that students receive through mastery experiences (i.e., their previous performances) and vicarious experiences of observing others' performances (Bandura, 1986). We suspect that most undergraduate music students performed well in high school, especially compared with other students at their high school. In college, students' beliefs about their music performance ability might be lowered because they perform more difficult music and their vicarious experiences would include the observation of their college-level peers (who likely have much higher abilities than their high school peers). To counter what could be a drop in expectancy during the first and second years of college, teachers and advisors could ensure that students are challenged but are successful in their early college experiences. Students would be more likely to maintain a higher level of self-efficacy for performance if they compared themselves with students their own age, as opposed to older students who are better performers because of their more extensive experiences.

Performance experiences are plentiful in the lives of all undergraduate music majors, so perhaps more specific experiences, as soloists or chamber musicians, may foster positive beliefs about expectancies for music performance as a career. Students who expect that they will be good performers, and believe this early in their undergraduate career, may be more likely to continue on that trajectory if they have early successes. It is important to acknowledge that it takes time for young adults to make these decisions and the choice of a music teaching career does not preclude the presence of music performing in their lives.

In this section, we have highlighted the importance of attainment value for students choosing a teaching career and the importance of expectancy for students choosing a performance career; however, because the other expectancy- and value-related variables also were correlated significantly with the career variables, we do not want to minimize the role of these other variables. Ways that teachers and advisors can help potential music performers recognize the value in music performance also might be useful. For aspiring music educators, teachers and advisors can improve students' expectancies for teaching music, help them enjoy teaching, and help them understand the benefits of teaching. In fact, Bergee and Grashel (2002) reported that generalized self-efficacy helped predict music teacher efficacy and career decisiveness. Parkes (2007, 2010) also has discussed the importance of teacher-efficacy levels in students choosing music teaching careers.

Research Implications

One of the important research findings from this study is that expectancies and values are important to consider when examining predictors of career choices. Given the high correlations between the constructs of the expectancy-value model and students' career intentions, the expectancy and value constructs appear to be relevant for researchers interested in examining music students' career choices. Further, the high Cronbach's alpha values for the instruments used in this study should provide a solid basis from which other researchers can build, either by using these instruments or by modifying them as needed (copies of the instruments are available as online supplemental material, at <http://jrme.sagepub.com/supplemental>).

Given that some of the constructs are highly correlated, it is possible that some of them could be grouped together to form larger psychological constructs. Researchers could test the extent to which the constructs in the expectancy-value model are distinct (e.g., Eccles & Wigfield, 1995; see Wigfield & Eccles, 2000, for a discussion of the component structure of the model). These types of studies would help to determine whether the structure of the expectancy-value model is appropriate to describe the motivations of these populations of students.

Conclusion

The expectancy-value model of motivation is a useful tool for examining the differences between music education students and music performance students. The constructs in the model predicted a significant amount of the variance related to students' intentions of having a career teaching classroom music or performing music. By examining the career choices of music students using the expectancy-value model, it is possible to gain a better understanding of how students' beliefs affect their career decisions.

Authors' Note

The data presented in this study were collected as part of a larger data collection process from which several distinct analyses were conducted and findings reported in different manuscripts. These studies were based on different theoretical frameworks, addressed different research questions, and used different methodologies. Publications related to these other findings are referred to in the text and the reference section of this article.

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