

Incentives and Barriers for Potential Music Teacher Education Doctoral Students

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Abstract:

The purpose of this study was to examine positive influences and barriers associated with entering a music teacher education doctoral program. Practicing music educators (N = 63), were asked to rate 48 positive-influence items and 54 barrier items. The highest-ranked positive influence was "Training young teachers to provide worthwhile educational experiences for their students, " while the highest-ranked barrier item was "Reduction of income while working on the degree." Using the top 21 positive-influence items and the top 21 barrier items, two factor-analysis procedures were calculated to determine whether positive-influence and barrier items could be reduced to a smaller number of discrete factors. Four positive-influence factors ("Prestige of and Connection with Faculty/University," "Desire to Affect Future Music Teachers," "Desire to Learn, " and "Personal/Professional Future") and two barrier factors ("Financial Challenges" and "Family/Time Considerations") were identified.

Keywords: music doctoral programs | music education

Article:

There has been a growing concern in recent years over an anticipated shortage of those responsible for training music teachers in the United States. Asmus (2001) characterized the situation as the "new challenge ... befalling music education" (p. 3). When prognosticating the resultant effect on K-12 education, he warned that "the shortage of music teacher educators and the paucity of those in training to become music teacher educators pose the single biggest threat to the health of music in our nation's schools" (p. 4). Linking the current shortage of K-12 music educators with an anticipated echo among the university ranks, Kimpton (2002) stated, "without music educators staying in the profession long enough to gain the expertise and desire to prepare another generation of music educators, we have no ready pool of future music education professors" (p. 4).

Since 1998, there has been a notable decline in the number of doctoral degrees granted in music education. From a high of 101 in 1998, the number of music education doctoral degrees granted at NASM-accredited institutions has dropped to 88 in 1999, and 76 in 2001 (Higher Education

Arts Data Services, 1999, 2000, 2002). The situation has been exacerbated further by an increasing demand for college positions in music education over the past 20 years. In 1980, music education vacancies were 6.50% of the total number of vacancies in all areas of music in higher education. By 2000, music education vacancies rose to be 10.66% of the total. Over the same 20-year period, vacancies in the broad areas of studio instruction, ensemble instruction, and academic instruction fell, while those in music education rose substantially (Hickey, 2002).

Similar shortages have been reported in other specialty areas, such as deaf education (LaSasso & Wilson, 2000), special education (Smith & Salzberg, 1994), and technology education (Rogers, 2001; Volk, 1997). Some of the researchers in these studies documented the existence of a shortage of teacher educators, while others have investigated reasons for the shortage. Rogers (2001) asked doctoral program graduates ($n = 9$) and current technology education teachers who were identified as outstanding candidates for doctoral studies ($n = 19$) to rank the strength of 10 positive influences and 10 barriers to enrollment in a doctoral program. Doctoral program graduates' top-five-ranked positive influences were "Personal goal/desire," "Quality and reputation of university/program," "Quality and reputation of the faculty," "Support of family," and "Financial support," while their top-five-ranked barriers were "Financial," "Time commitment," "Lack of quality doctoral programs," "Uncertainty about employment after graduation," and "Geographic location of the university." Technology education teachers' top-five-ranked positive influences were "Personal goal/desire," "Distance education," "Flexibility of the program," "University's close geographic location," and "Financial support," while their top-five-ranked barriers were "Time commitment," "Geographic location of the university," "Financial," "Family responsibilities," and "Lack of flexibility in the program."

Clear patterns are emerging in the research addressing teacher educator shortages in other fields. Music education researchers, however, are just starting to investigate the problem. In the effort to begin such a line of research, Teachout (in press) conducted a study, similar to that by Rogers (2001), in which recent doctoral graduates ($n = 23$) and practicing music educators ($n = 22$) were asked to list the positive influences and barriers affecting their decisions to enter a doctoral program in music education. All subjects' responses were analyzed to determine (a) the total number of positive influences and barriers that were listed and (b) naturally occurring broad categories that could be used to code each positive influence or barrier. The broad categories were subsequently used for reporting results and drawing conclusions.

Recent doctoral graduates' top five positive-influence categories, accounting for more than 50% of their total number of positive-influence responses, were "Relationship with University Faculty," "Characteristics of the Program," "Desire to Affect the Profession," "Financial Incentives," and "Reputation of the Program," while their top three barrier categories, accounting for more than 50% of their total number of barrier responses, were "Financial Concerns," "Time," and "Relationship with University Faculty." Practicing music educators' top four positive-influence categories, accounting for more than 50% of their total number of positive-influence responses, were "Love of Learning," "University Environment," "Relationship with University Faculty," and "Financial Incentives," while their top three barrier categories, accounting for more than 50% of their total number of barrier responses, were "Financial Concerns," "Characteristics of the Program," and "Anxiety over Leaving Current Job." In this initial study of the music teacher educator shortage, Teachout grouped individual responses into

larger categories for comparison between practicing music educators and recent doctoral graduates. In doing so, trends among the broad categories were uncovered, establishing some similarities to the findings of Rogers (2001). There is a need, however, to continue this line of research in the effort to achieve a greater degree of clarity about the nature of each positive-influence and barrier item. It may be helpful to those recruiting potential doctoral students to quantitatively examine a new, larger data set to see if the original conclusions could be substantiated as well as whether new trends would be uncovered. Therefore, the purposes of the present study were to determine (a) the relative strength of each positive-influence and barrier item and (b) whether positive-influence and barrier items could be reduced to a smaller number of discrete factors. The population was limited to practicing music educators identified as being outstanding candidates for doctoral studies.

Method

Practicing music educators (N= 63), identified as being outstanding candidates for doctoral studies, served as subjects in this study. They included women (n = 36) and men (n = 27) from 25 states throughout the South, East, Midwest, Southwest, and the Western United States and who specialized in teaching instrumental music (n = 33), classroom/general music (n = 19), or choral music (n = 11). Subjects' ages ranged from 22 to 49 years, with a mean of 32.32. By searching Dissertations Abstracts International with the keywords "music education" during the years of 1996-2001, a list was generated containing 52 institutions that had granted at least one doctorate in music education during the designated 5-year time span. Between March and June 2003, music education faculty members at the 52 institutions were contacted and asked to relay an e-mail message to five practicing music teachers who currently hold or were working on a master's degree and who the faculty would categorize as being outstanding candidates for doctoral studies. In the message, potential subjects were invited to contact the researcher via email if they were interested in participating in the study. Seventy-five subjects contacted the researcher and were sent questionnaires, and 63 returned completed surveys, resulting in a response rate of 84%. Data collection was completed in August 2003.

The data collection instrument in the current study was developed using a modified Delphi technique with preliminary data gathered for a study by Teachout (in press). In that study, subjects (N = 45) were asked to list aspects that would or have positively influenced their decision to enter a doctoral program and to list those barriers that had hindered them from entering a doctoral program thus far or that they were able to overcome to earn the degree. The 206 positive-influence responses and 157 barrier responses were examined to eliminate exact duplication only. Responses of a similar nature, characterized by subtle variations, were included in the present data collection instrument in the attempt to uncover as much information as possible. Ultimately, a close-ended data collection instrument was developed for the present study that included 48 positive-influence items and 54 barrier items. For each positive-influence item, respondents were asked, "How strong a positive influence was this item toward your decision to enter a doctoral program?" For each barrier item, "How strong of a barrier was this item in hindering you from entering a doctoral program?" Respondents indicated the strength of each positive-influence and barrier item using a 5-point scale [5 = extremely strong, 4 = very strong, 3 = strong, 2 = somewhat strong, and 1 = not strong]. Two Cronbach's alpha reliability coefficients were calculated, establishing high levels of internal consistency among the 48

positive-influence items ($\alpha = .87$) and among the 54 barrier items ($\alpha = .90$). For each item, a mean score was calculated and used as a basis for determining rank order among the positive-influence items and barrier items. Furthermore, two factor-analysis procedures were calculated to determine whether the top positive-influence items and the top barrier items could be reduced to a smaller number of discrete factors.

Results

The means and rankings of the 48 positive-influence items and the 54 barrier items are reported in Tables 1 and 2, respectively. Using mean score rankings, the top 21 items from the positive-influence item pool were selected to be included in an exploratory factor analysis (FA). Twenty-one items were selected to insure a subject-to-variable ratio of 3:1, deemed acceptable by Asmus (1989). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .654, and Bartlett's Test of Sphericity was found to be significant. These results indicated that the sample was appropriate for an FA procedure. Between 2 and 7 factors were rotated using a principal components analysis and a Direct Oblimin rotation method ($\delta = 0$). The Direct Oblimin rotation, an oblique method, allows for correlated factors to be considered as subdimensions within a common theme, positive influences in this case. When used to uncover latent factors, Fabrigar, Wegener, MacCallum, and Strahan (1999) found that an oblique rotation often produced a slightly better simple structure than did a varimax rotation. In the present study, the scree plot of derived eigenvalues, a recommended procedure by Cattell (1978), was used to uncover four positive-influence factors, each contributing a substantial percentage of variance to the solution: "Prestige of and Connection with Faculty/University" (22.62% of the variance), "Desire to Affect Future Music Teachers" (12.84% of the variance), "Desire to Learn" (9.45% of the variance), and "Personal/Professional Future" (8.74% of the variance). Combined, these factors contributed 53.65% cumulative variance to the solution. Five positive-influence items (Having input about the design of your program, Positive experiences with faculty in your master's program, Working with others who are committed to music education, Being awarded an assistantship/fellowship, and Geographic location of the university) were removed due to low factor loadings, leaving 16 remaining items distributed across the four factors (see Table 3). Twenty-one top barrier items were also selected for an exploratory FA. The subject-to-variable ratio was 3:1. A scree plot was used to determine that a two-factor solution would be most appropriate. Upon an initial examination of communalities, six barrier items (Keeping your marriage, partnership, relationship, etc., together; Accumulation of debt due to school loans; Moving away from friends and family; Having an impact on K-12 students now; Being awarded little or no financial assistance; and Residency requirement) were removed due to low communality values ($< .300$). The remaining 15 items produced a Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .812; Bartlett's Test of Sphericity was found to be significant. Therefore, the sample of barrier items was determined to be appropriate for an FA procedure. Two factors were rotated using a Direct Oblimin rotation method ($\delta = .3$). "Financial Challenges" was found to contribute 40.74% of the variance, while "Family/Time Considerations" was found to contribute 18.32% of the variance. Combined, both factors contributed 59.04% cumulative variance to the solution (see Table 4).

Table 1
Positive Influence Item Means and Rankings

Item	Mean	Rank
Training young teachers to provide worthwhile educational experiences for their students.	4.29	1
Love of learning and general intellectual fulfillment.	4.24	2
Teaching future music educators.	4.08	3
The excitement and challenge of pursuing an advanced degree.	4.00	4
Being in a musically & intellectually sophisticated environment.	3.95	5
Desire to learn more about your field.	3.94	6
Connection with and respect for the faculty where you would attend.	3.84	7
Opportunity to make an important contribution to the music education profession.	3.83	8.5
Positive experiences with faculty in your master's program.	3.83	8.5
Working with others who are committed to music education.	3.78	10
Encouragement from graduate school faculty.	3.76	11
Geographic location of the university.	3.67	12
Reputation of the faculty.	3.65	13
Career advancement.	3.54	14
Reputation of the university/program.	3.52	15
Being awarded an assistantship/fellowship.	3.48	16
Having input about the design of your program.	3.41	17
Working with recognized scholars and leaders in the field.	3.40	18
Being surrounded by accomplished musicians and scholars.	3.38	19
Coursework that would be applicable to current and future job requirements.	3.35	20
Support of family, friends, and colleagues.	3.33	21
Recognizing the need for music teacher educators.	3.32	22
Quality of university facilities.	3.29	23
Availability and flexibility of course offerings.	3.25	24
Opportunity to teach at the college level in a tenure-track position.	3.21	25
Feeling "ready," due to your age and/or experience.	3.00	26
Opportunity to study with a specific music education professor.	2.98	27
Teaching college-age students.	2.97	28
Interest in music education research.	2.95	29
Increasing your influence in the music education community.	2.94	30.5
Making important contacts with others in your field.	2.94	30.5
Interest in researching a particular problem in music education.	2.78	32
Frustration with the state of K-12 music teaching and learning.	2.68	33.5
Reasonable entrance requirements.	2.67	33.5
Desire to be acknowledged as an expert.	2.65	35
Increasing your earning potential.	2.48	36
Feeling that a gap exists in your knowledge about music education and/or education in general.	2.44	37
Job placement history of the program.	2.42	38
Receiving school district funding to pay for tuition.	2.38	39
Opportunity to study with a specific conducting professor.	2.29	40
Friends or peers who completed their doctoral degrees.	2.21	41
Prior experience as a cooperating teacher while teaching in the K-12 levels.	2.13	42
Prior experience with college teaching.	1.97	43
Opportunity to study with a specific studio professor.	1.70	44
Escape from public school teaching.	1.52	45.5
Living in a new place.	1.52	45.5
Opportunity to study with a specific theory or history professor.	1.30	47
Earning a doctorate is required for continuation in your current position.	1.16	48

Table 3
Factor Loadings and Solution Variance Contributions for Selected Positive Influence Items

Item	Factor			
	1	2	3	4
1. Prestige of and Connection with Faculty/University				
Reputation of the faculty	.916	.158	-.007	.006
Connection with and respect for the faculty where you would attend	.801	-.001	-.009	.102
Reputation of the university/program	.709	.127	.003	.214
Working with recognized scholars and leaders in the field	.673	-.191	-.008	-.007
Encouragement from graduate school faculty	.598	-.002	.199	.000
Solution variance contributed	22.62%			
2. Desire to Affect Future Music Teachers				
Training young teachers to provide worthwhile educational experiences for their students	-.005	.883	.009	.149
Teaching future music educators	.004	.880	-.001	.008
Opportunity to make an important contribution to the music education profession	.000	.621	.003	-.233
Solution variance contributed	12.84%			
3. Desire to Learn				
The excitement and challenge of pursuing an advanced degree	-.006	.411	.810	.136
Love of learning and general intellectual fulfillment	-.174	-.235	.689	-.106
Desire to learn more about your field	-.002	.000	.654	.000
Being surrounded by accomplished musicians and scholars	.220	-.001	.545	.249
Being in a musically and intellectually sophisticated environment	.270	-.271	.519	-.311
Solution variance contributed	9.45%			
4. Personal/Professional Future				
Career advancement	-.134	-.006	.004	.727
Coursework that would be applicable to current and future job requirements	-.005	-.008	.004	.706
Support from family, friends, and colleagues	.159	-.151	.006	.550
Solution variance contributed	8.74%			
Total solution variance contributed by 4 factors = 53.65%				

Discussion

The results of this study should be interpreted with a degree of caution. Although music education faculty members at 52 institutions were asked to relay an email message to five practicing music teachers inviting them to participate, there was no opportunity to determine exactly how many practicing music teachers actually received the invitation. The 84% response rate represents those who returned a completed questionnaire after providing an initial indication of interest. There may have been others contacted by music education faculty members who were less interested in entering a doctoral program or perhaps felt more strongly about their

reasons for and/or against entering than did the respondents. Replication of this research using a modified sample selection procedure would provide the opportunity to determine if similar results would be obtained. Furthermore, not all of the positive-influence and barrier items were used in the two FA procedures due to the need to maintain proper subject-to-variable ratios. Additional subjects would allow for more items to be considered in similar calculations. Nevertheless, the results of the present study do provide some fascinating findings, especially when compared to those found by Teachout (in press).

When studying the means among all items, one of the most striking occurrences was that subjects indicated a higher strength for the top positive-influence items than they did for the top barrier items. This is similar to the findings of Teachout (in press) in which subjects, when asked to generate a list of positive influences and barriers, provided a greater number of positive influence items than barrier items. This additional support for the idea that the top positive influences are stronger than barriers is important because strength, rather than frequency, was measured in the present study. When examining means, rankings, and factors found among the positive-influence and barrier items some interesting comparisons can be made between these results and those found by Teachout (in press). In the present study, the positive-influence factors "Prestige of and Connection with University/Faculty" and "Desire to Learn" and several of the highly ranked positive-influence items provide substantial support for two of Teachout's positive-influence categories ("Relationship with University Faculty" and "Love of Learning"). The barrier factor "Financial Challenges" and several highly ranked barrier items support Teachout's barrier category "Financial Concerns." Marginal support was found for Teachout's positive-influence category, "University Environment," and barrier category, "Anxiety over Leaving Current Job"; both categories were supported by moderately to highly ranked items, however, neither was found to have a parallel factor in the present study. Neither Teachout's positive-influence category "Financial Incentives," nor the barrier category "Characteristics of the Program" was supported by the results of the present study. Factors not foreshadowed by the results of Teachout (in press) were the positive-influence factors "Desire to Affect Future Music Teachers" and "Personal/Professional Future" and the barrier factor "Family/Time Considerations." Interestingly, when subjects responded to items in the present study that asked them to indicate the specific positive influence of strength of studying with a particular music education, conducting, studio, or theory professor, these items were ranked 27th, 40th, 44th, and 47th, respectively. It seems that prospective doctoral students may not always be drawn to specific faculty members, but rather, they seem to be more positively influenced by just being contacted, encouraged, and nurtured in their process.

The results of the present study, especially when coupled with those found by Teachout (in press), provide clear support for the idea that (a) prestige of and connection with faculty and the university and (b) the desire to learn are strong positive influences and that financial challenges typically provide the strongest barrier for those considering doctoral study in music teacher education. Suggestions for those at the university level, based on these results, may include investing time and energy in making personal contacts with prospective doctoral students and highlighting opportunities for prospective students to be stretched intellectually or musically in their programs. In addition, those at the university need to look creatively for ways to increase financial assistance in the effort to help fill the financial void that one experiences when leaving a K-12 teaching position. It also may be helpful to provide financial counseling to those who are

considering entering a doctoral degree program. Such counsel could include (a) helpful and accurate information about the cost of attending graduate school, (b) the effect of various work/course load combinations on one's ability to successfully complete the degree, and (c) suggestions on how to financially prepare in advance of starting a degree program.

Table 4
Factor Loadings and Solution Variance Contributions for Selected Barrier Items

Item	Factor	
	1	2
1. Financial Challenges		
Leaving a good K-12 level salary	.925	-.186
Reduction of income while working on the degree	.843	-.007
Long-term salary difference between (higher-paid) K-12 level and (lower-paid) college level	.828	.000
Leaving current K-12 level job security	.815	.000
Anxiety over leaving my current K-12 teaching position	.802	-.004
Lack of paid insurance and/or pension	.664	.008
Pay, associated with completing the degree, does not match the experience and education	.635	.156
Current job time demands	.510	.338
Solution variance contributed	40.72%	
2. Family/Time Considerations		
Family obligations	-.161	.922
Your family is currently top priority	-.170	.919
"Spinning all of the plates" (being a wife/husband, mother/father, son/daughter, teacher, volunteer, etc.)	.001	.844
Moving my family to attend school	-.162	.668
Not willing to move for a job	.298	.533
Completing the coursework while working part-time or full-time	.305	.520
Needing time to research and write the dissertation	.257	.519
Solution variance contributed	18.32%	
Total solution variance contributed by 2 factors = 59.04%		

New factors discovered in the present study were the positive influences "Desire to Affect Future Music Teachers" and "Personal/ Professional Future" and the barrier "Family/Time Considerations." Additional research into each of these three factor categories is warranted before specific recommendations can be made. A replication of the present study with additional subjects would allow for more items to be considered in the FA calculations, consequently either strengthening these factors and/or uncovering additional factors. Furthermore, investigations

with consideration given to such fundamental sociological variables as age, gender, and area of expertise might help to reveal complexities and trends that have not yet been uncovered. Such research might help to explain better the strength of factors found in the present study and provide solid evidence from which to draw conclusions and make recommendations. Finally, an investigation similar to the present study should be conducted using recent doctoral graduates (Teachout's alternative population) as subjects. A subsequent comparison might reveal information about the evolution that doctoral students undergo from the time they consider entering a program to when they successfully complete their degrees. In light of the growing concern over an emerging shortage of music teacher educators, it is important for researchers to continue examining all relevant variables in the effort to understand better and possibly stem such a trend.

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