

Eminence in Music Education Research as Measured in the Handbook of Research on Music

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Eminence in Music Education Research as Measured in the Handbook of Research on Music Teaching and Learning

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Abstract

The purpose of this study was to identify which music education (a) scholars, (b) journals, (c) authored monographs (i.e., books, published tests, textbook series), (d) edited books or proceedings, and (e) dissertations are the most eminent, as measured by the frequency of citation in the Handbook of Research on Music Teaching and Learning. Data from the 4596 citations in the 55 chapters of the Handbook were analyzed and rank ordered. The most frequently cited scholars were E. E. Gordon and R. Colwell. The most eminent bibliographic sources were the Journal of Research in Music Education, A Philosophy of Music Education, the Handbook of Research on Teaching, and the dissertation by L. C. DeLorenzo. The rankings illustrate the diversity in the research base and the extent to which sources outside of music education are influential.

The Study

As a profession grows and matures, it becomes necessary to take stock periodically of the persons, journals, and books that have helped shape the current state of the field. Such analysis can provide an overview of the present influential figures and ideas in the field and can suggest future directions. Essays on the state of research can be useful for this purpose, but they necessarily reflect the personal biases of their authors. Myers (1970) points out that as research in a discipline expands and becomes more specialized, what is important to one scholar can be trivial to another. To counter the subjectivity of personal essays on research, objective means have been used to review a research base. In music education, researchers have used quantitative approaches to examine the content in the Bulletin of the Council for Research in Music Eduction (Stabler, 1987) and in the Journal of Research in Music Education (Yarbrough, 1984), the research reports at MENC conferences (Hedden, 1992), the eminence and productivity of music scholars and research institutions (Standley, 1984), the influence of research articles (Sample, 1992), and the research subjects in music education (Kratus, 1992).

Objective means have been used to study scholarly eminence in other fields by analyzing the frequency with which authors have been cited in the literature (Myers, 1970; Roche & Smith, 1978). The number of citations to one's work may actually be a better indicator of eminence than the number

of one's publications, because an idea that is cited has been found useful by someone else (Roche & Smith, 1978). Scholarly work that is not cited has not been as useful to others and, therefore, makes less of a contribution to the field. This definition of eminence equates the eminence of a resource with the resource's impact on a broader community of scholars.

Standley (1984) ranked the eminence of music scholars and music research institutions based on frequency of publication and citation in the Journal of Research in Music Education (JRME), the Bulletin of the Council for Research in Music Education (the Bulletin), and the Journal of Music Therapy from the journals' inception to 1984. Her study ranked Florida State University as the top academic institution in music research productivity and ranked C. K. Madsen as the most productive and most eminent scholar in music research. Sample (1992) similarly identified the most frequently cited studies in JRME, the Bulletin, and Contributions to Music Education from 1963 to 1989. He found that an article by Madsen, Wolfe, and Madsen (1969) was the most frequently cited music education study during that period.

Standley and Sample reviewed journal citations made over a period of many years, providing an historical view of eminence. It seems likely, though, that eminence shifts over time as research trends and educational ideas change. A scholar who was cited frequently in an earlier period may have little influence on present day research. Until recently, it has not been possible to compile a contemporaneous, objective ranking of eminence in music education, because the amount of research published in any one year was not large enough on which to base a meaningful frequency count of citations.

The Handbook of Research on Music Teaching and Learning (Handbook) (Colwell, 1992) is the most comprehensive review of research in music education ever published. The Handbook's 832 pages contain 55 chapters organized into eight broad sections: Conceptual Framework, Research Modes and Techniques, Evaluation, Perception and Cognition, Teaching and Learning Strategies, The Teaching of Specific Musical Skills and Knowledge in Different Instructional Settings, Schools/Curriculum, and Social and Institutional Contexts. Some of the chapters describe various research techniques (e.g., Experimental Research Methodology), and others present reviews of literature on a single topic (e.g., Motivation). The chapters were "written by the authorities in the profession," who were selected in consultation with editorial board members, "publishers, department chairs, funding agencies, and research centers" (Colwell, 1992, p. x). The Handbook provides an encyclopedic depiction of the state of music education research as of 1992.

Each chapter ends with a list of references or notes. According to Colwell, the "guideline to authors was to be as sparing as possible with the references" (p. x). For the purpose of the present study, it was assumed

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that the bibliographic sources cited in the chapters are among the most important and influential sources in their respective topic areas. As such, the content of the bibliographic items cited in the reference lists can be analyzed to identify those persons and resources that have exerted the greatest influence in music education research.

The purpose of this study was to identify which music education (a) scholars, (b) journals, (c) authored monographs (i.e., books, published tests, textbook series), (d) edited books or proceedings, and (e) dissertations are the most eminent, as measured by the frequency of citation in the Handbook of Research on Music Teaching and Learning.

Method

Fifty-four of the 55 chapters in the *Handbook* conclude with alphabetically ordered reference lists in APA style. The chapter that does not contain a reference list (Chapter 53) uses endnotes to cite sources. There are 4596 citations included in the 54 reference lists and in the endnotes for Chapter 53, resulting in a mean of 83.6 citations per chapter. The number of citations per chapter ranges from a high of 208 to a low of 17.

In the back of the Handbook is a name index, indicating the page numbers on which the names of the persons cited in the book are mentioned. The name index was used as a guide to identifying the most frequently cited scholars. Frequency of citation was measured in two ways. First, the number of citations in the reference lists credited to each scholar was counted. Second, a count was conducted of the number of chapters in which each scholar was cited. Each way of counting resulted in a different kind of information. A count of the number of citations by a scholar provided an indication of the depth of a scholar's influence in music education. For example, a scholar with 10 citations was considered to be more deeply influential in music education research than would a scholar with 5 citations. A count of the number of chapters in which a scholar was cited provided an indication of the breadth of a scholar's influence. A scholar cited in 10 chapters was considered eminent in a wider variety of topics than was a scholar cited in 5 chapters. Furthermore, it was necessary to conduct a count of the chapters, because it was conceivable that an author of one of the chapters in the Handbook could make many self-references, thereby skewing any measure of eminence based solely on the total number of citations. The self-references of chapter authors were included in the totals, because in many instances the chapter authors were leading contributors to their fields of expertise. References to any female scholar whose name had changed over the course of her career (e.g., Zimmerman, nee Pflederer) were combined.

In counting the number of citations per scholar, a distinction was made between single-author and multiple-author citations. Citations with single authors were credited fully to those authors, and citations with multiple authors were credited fractionally, depending on the number of co-authors. For example, if an author were one of five co-authors of an article, then the author would be credited for 1/5 of the publication. To give full credit to each of the five co-authors, as was done in Standley's (1984) study of eminence, would imply that an article with five co-authors conveys five times the eminence as one with a single author.

To determine the eminence of journals, a count was made of the frequency with which articles from the journals were cited. As was done with the scholars, counts were conducted of both the total number of citations from each journal and the number of chapters in which the journals were cited. This was done to distinguish between journals that may have been cited frequently in a few topic areas and journals that may have been cited widely in a variety of topic areas.

The eminence of authored monographs (i.e., books, published tests, textbook series) was found by counting the number of chapters in which a monograph was cited. It was unnecessary to distinguish between the total citations and chapters, because monographs can be cited only once in a reference list. References to first and later editions of the same book were combined. The category of monographs did not include edited books, published proceedings, or dissertations.

To determine the eminence of edited books and published proceedings, a count was made of both the number of times that chapters from the book/proceedings were cited and the number of chapters in which the book/proceedings was cited. Unlike an authored monograph, the contents of an edited book or proceedings could be cited more than once in a single chapter.

The eminence of dissertations was measured by counting the number of chapters in which each dissertation was referenced. This procedure was the same as that used for authored monographs.

Data for the five categories (scholars, journals, authored monographs, edited books/proceedings, and dissertations) were tabulated. To ensure accuracy, the data counts were conducted twice. For the categories of scholars, journals, and edited books/proceedings, the data were rank ordered by the total number of citations and by the number of chapters in which cited. The rank orders included the 10 most frequently cited items in each category, although in most cases, ties among the frequency counts necessitated the inclusion of more than 10 items. An a priori decision was made to exclude any item which appeared in fewer than three chapters. This was done to prevent the inclusion of any item with an extremely narrow focus in music education research.

Results

The rankings for eminence among scholars, as ranked by the total number of citations and by the number of chapters in which cited, are presented in Table 1. Some of the citation totals are not whole numbers, due to the partitioning of credit for multiple-authored references. A total of 18 persons are listed in the two rankings. Seven of the 10 scholars with the highest number of citations (Gordon, Reimer, Eisner, Colwell, Gardner, Radocy, and Webster) were also among the 15 researchers cited in the most chapters. Five of the scholars (Eisner, Gardner, Serafine, Dowling, and Hargreaves) are from disciplines other than music education. The number of citations credited to Gordon was 72% more than that of any other scholar.

	Table 1 Eminence of Researchers		
Ranked by Number of Citations			
Rank	Author	# Citations	
1	Gordon, E. E.	36.5	
2	Reimer, B.	21.2	
3	Eisner, E. W.	21.0	
4	Colwell, R.	20.9	
5.5	Gardner, H.	18.5	
5.5	Radocy, R. E.	18.5	
8	Pflederer-Zimmerman, M.	18.0	
8	Serafine, M. L.	18.0	
8	Webster, P. R.	18.0	
10	Dowling, W. J.	17.0	
	Ranked by Number of Chapters in Which Cited	· · · · · · · · · · · · · · · · · · ·	
Rank	Author	# Chapters	
1	Colwell, R.	16	
2	Gordon, E. E.	15	
3.5	Boyle, J. D.	14	
3.5	Reimer, B.	14	
5.5	Madsen, C. K.	13	
5.5	Radocy, R. E.	13	
7	Hedden, S. K.	12	
8	Gardner, H.	11	
12	Asmus, E. P.	10	
12	Shehan-Campbell, P.	10	
12	Eisner, E. W.	10	
12	Hargreaves, D. J.	10	
12	Schmidt, C. P.	10	
12	Webster, P. R.	10	
12	Yarbrough, C.	10	

The journal rankings are shown in Table 2. Eight of the journals with the most citations were also among those cited in the most chapters. The Journal of Research in Music Education, which was ranked first in both lists, was cited more than twice as often as the second-ranked journal, the Bulletin of the Council for Research in Music Education. The International Journal of Music Education (IJME), which was ranked sixth by number of citations, did not appear in the top 10 rankings for number of chapters, because 25 of the 30 citations for IJME appeared in a single chapter on international trends.

	Table 2 Eminence of Journals	
	Ranked by Number of Citations	
	·	#
Rank	Journal	Citations
1	Journal of Research in Music Education	496
2	Bulletin of the Council for Research in Music Education	188
3	Psychology of Music	44
4	Music Educators Journal	39
5	Psychomusicology	35
6	International Journal of Music Education	30
7	Educational Researcher	28
8	Journal of Aesthetic Education	25
9	Design for Arts Education	23
10	Psychological Review	18
	Ranked by Number of Chapters in Which Cited	
Rank	Journal	# Chapters
1	Journal of Research in Music Education	43
	Bulletin of the Council for Research in Music Education	38
2 3 4 5	Music Educators Journal	20
4	Psychology of Music	17
	Psychomusicology	13
6.5	Educational Researcher	12
6.5	Journal of Aesthetic Education	12
9	Contributions to Music Education	9
9	Psychological Review	9
9	Update	9

Table 3 shows the rank order for authored monographs. The list contains 19 items, and 13 monographs tied with 5 citations each. The most frequently cited monograph was Reimer's A Philosophy of Music Education, first and second editions. The author with the most monographs on the list is Gordon, with four items, including one co-authored monograph. Boyle and Radocy jointly authored two of the items on the list. The list

includes five books on the psychology of music (by Serafine, Hargreaves, Radocy & Boyle, Seashore, and Sloboda), three curriculum monographs (by Eisner, MENC, and Gordon & Woods), and three philosophy books (by Reimer, Langer, and Goodman).

	Table 3 Eminence of Authored Monographs			
Rank	Author	Title	# Citations	
1	Reimer	A philosophy of music education	8	
2.5	Gordon	Learning sequences in music	7	
2.5	Serafine	Music as cognition	7	
5	Eisner	The educational imagination	6	
5	Langer	Philosophy in a new key	6	
5	MENC	The school music program	6	
13	Borg & Gall	Educational research	5	
13	Boyle & Radocy	Measurement and evaluation of musical experience	5	
13	Gardner	Frames of mind	5	
13	Goodman	The languages of art	5.	
13	Gordon	Musical aptitude profile	5	
13	Gordon	Primary measures of music audiation	5	
13	Gordon & Woods	Jump right in: Music curriculum	5	
13	Hargreaves	The developmental psychology of music	5	
13	Meyer	Emotion and meaning in music	5	
13	Moorhead & Pond	Music of young children	5 5 5 5	
13	Radocy & Boyle	Psychological foundations of musical behavior	. 5	
13	Seashore	Psychology of music		
13	Sloboda	The musical mind	5	

The most frequently cited edited book or proceedings was the Handbook of Research on Teaching, first, second, and third editions (see Table 4). Proceedings of symposia figured prominently on the lists and included the Documentary Report of the Ann Arbor Symposium, Ann Arbor III, Crane Symposium (edited by Fowler), Symposium in Music Education (edited by Colwell), and Applications of Research in Music Behavior (edited by Madsen and Prickett). Four books on the psychology of music (edited by Sloboda, Deutsch, Hodges, and Howell) were included on the lists.

	Emi	Table 4 nence of Edited Books and Proceedings	
		Ranked by Number of Citations	
Rank	Editor	Book	# Citations
1	Gage/Travers/ Wittrock	Handbook of research on teaching	22
2	Sloboda	Generative processes in music	15
3	Deutsch	Psychology of music	13
4	_	Ann Arbor III: Motivation and creativity	10
6	_	Documentary report of Ann Arbor Symposium	9
6	Fowler	Crane Symposium	9
6	Madsen & Prickett	Applications of research in music behavior	9
8	Hodges	Handbook of music psychology	7
11	Colwell	Symposium in music education	6
11	Bloom	Developing talent in young people	6
11	Mitzel	Encyclopedia of educational research	6
11	Alperson	What is music?	6
11	Howell et al.	Musical structure and cognition	6
	Rani	ked by Number of Chapters in Which Cited	
Rank	Editor	Book	# Chapters
1	Gage/Travers/ Wittrock	Handbook of research on teaching	9
2	-	Documentary report of Ann Arbor Symposium	8
3	Deutsch	Psychology of music	7
5.5	Colwell	Symposium in music education	6
5.5	Fowler	Crane Symposium	6
5.5	Hodges	Handbook of music psychology	6
5.5	Sloboda	Generative processes in music	6
9.5		Ann Arbor III: Motivation and creativity	5
9.5	Bloom	Developing talent in young people	5
9.5	Madsen & Prickett	Applications of research in music behavior	5
9.5	Mitzel	Encyclopedia of educational research	5

The list of most eminent dissertations (Table 5) contains 19 items, and 13 dissertations tied with 3 citations each. The most common research topics in the dissertations were creativity and critical thinking (DeLorenzo, deTurk, Cohen, and Kratus), rehearsal techniques (Erbes, Caldwell, Pontious, and Thurman), and comparison of pedagogical approaches (Olson, Palmer, and Zemke). Five of the 19 dissertations were from the University of Illinois at Urbana-Champaign, and two were from the University of Wisconsin at Madison.

Table 5 Eminence of Dissertations		
Rank	Author, Year, Title, University	# Citations
1	DeLorenzo, L. C. (1987). An exploratory field study of sixth- grade students' creative music problem solving processes in the general music class. Teachers College, Columbia University, New York.	5
4	Broquist, O. H. (1961). A survey of attitudes of 2594 Wisconsin elementary school pupils toward their learning experience in music. University of Wisconsin, Madison.	4
4	deTurk, M. S. (1988). The relationship between experience in performing music class and critical thinking in music. University of Wisconsin, Madison.	4
4	Erbes, R. L. (1972). The development of an observational system for the analysis of interaction in the rehearsal of musical organizations. University of Illinois, Urbana.	4
4	Krueger, P. J. (1985). Influences of the hidden curriculum upon the perspectives of music student teachers: An ethnography. University of Wisconsin, Madison.	4
4	Upitis, R. (1985). Children's understanding of rhythm: The relationship between development and musical training. Harvard University, Cambridge.	4
13	Caldwell, W. M. (1980). A time analysis of selected musical elements and leadership behaviors of successful high school choral conductors. Florida State University, Tallahassee.	3
13	Cohen, V. W. (1980). The emergence of musical gestures in kindergarten children. University of Illinois, Urbana.	3
13	Crumpler, S. E. (1983). The effect of Dalcroze eurhythmics on the melodic growth of first grade students. University of Kansas, Lawrence.	3
13	Frakes, L. (1984). Differences in music achievement, academic achievement, and attitudes among participants, dropouts, and nonparticipants in secondary school music. University of Iowa, Iowa City.	3
13	Goetze, M. (1985). Factors affecting accuracy in children's singing. University of Colorado, Boulder.	3
13	Kratus, J. K. (1985). Rhythm, melody, motive, and phrase characteristics of original songs by children aged five to thirteen. Northwestern University, Evanston, IL.	3
13	Olson, R. G. (1967). A comparison of two pedagogical approaches adapted to the acquisition of melodic sensitivity in sixth-grade children: The Orff method and the traditional method. Indiana University, Bloomington.	3

	Table 5 (continued) Eminence of Dissertations	
Rank	Author, Year, Title, University	# Citations
13	Palmer, M. H. (1974). The relative effectiveness of the Richards and the Gordon approaches to rhythm reading for fourth-grade children. University of Illinois, Urbana.	3
13	Pontious, M. F. (1982). A profile of rehearsal technique and interaction of selected band conductors. University of Illinois, Urbana.	3
13	Shuler, S. C. (1986). The effects of Gordon's learning sequence activities on music achievement. Eastman School of Music, University of Rochester.	3
13	Thurman, V. L. (1977). A frequency and time description of selected rehearsal behaviors used by five choral conductors. University of Illinois, Urbana.	3
13	Zemke, S. L. (1970). A comparison of the effects of a Kodály-adapted music instruction sequence and a more typical sequence on auditory musical achievement in fourth grade students. University of Southern California, Los Angeles.	3

Discussion

The ranking of eminent scholars is notable for the diversity among the members. The list contains empiricists, curriculum specialists, philosophers, and theorists. Perhaps this diversity reflects the current variety of scholarly methods and fields of study in music education. Given this list of scholars, it would be difficult to make the case that a single theory, school, or research direction dominates the literature.

It is interesting to note the differences between the ranking of eminent scholars in the present study and in that compiled by Standley (1984). Only 5 of the 18 scholars ranked as most eminent in the *Handbook* (Gordon, Colwell, Pflederer-Zimmerman, Madsen, and Yarbrough) appear in the top 20 positions of eminence in Standley's study. There are three possible reasons for these differences. First, Standley counted citations from music therapy as well as from music education. According to her figures, 340 of the 1162 articles she surveyed (29% of the total) were published in the *Journal of Music Therapy*. Conversely, only one chapter in the *Handbook* was devoted to a therapy-related topic (i.e., students with disabilities), and the *Journal of Music Therapy* was not cited throughout the *Handbook* as often as were the 12 journals in Table 2. This explains why an influential scholar in music therapy like E. T. Gaston was ranked 4.5 in

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eminence by Standley, but was not highly ranked in the present study. Second, Standley reviewed reference lists from 1953 to 1982, whereas the present study examined references in a 1992 publication. As a result, J. Mursell, who was more commonly cited in earlier decades, appears as eighth in eminence on Standley's ratings but does not appear in the present ratings. A third explanation for the difference in rankings is that Standley credited each co-author named in a citation with the full credit for the citation, and the present study partitioned the eminence fractionally among the co-authors. Standley's method substantially improved the rankings for those scholars whose publications were primarily co-authored.

The rankings of journals underscores the preeminence of the Journal of Research in Music Education and the Bulletin of the Council for Research in Music Education in the profession. The inclusion of Educational Researcher and Psychological Review demonstrates that the related research in the broader fields of education and psychology is influential in music education research. The eminence of the 12 journals in Table 2 suggests that they should form the core of the serials collection in music education research institutions and that graduate students in music education should be introduced to these journals in research courses.

The authored monographs, edited books, and proceedings that were ranked highest include works from psychology, philosophy, and general education, which is indicative of the close relationship music education has with these fields. The variety of topics reflected in the list suggests a corresponding diversity in the research base. Six of the 19 eminent monographs were first published 25 years or more prior to the publication of the Handbook (Langer's Philosophy in a New Key, Goodman's The Languages of Art, Gordon's Musical Aptitude Profile, Meyer's Emotion and Meaning in Music, Moorhead and Pond's Music of Young Children, and Seashore's Psychology of Music). The fact that these monographs are frequently cited long after their original publication is evidence of their continuing influence on the profession.

The dissertations cited most frequently provide useful results for the profession and can serve as models for persons beginning to write a dissertation. It should hearten doctoral students to know that a dissertation can influence the research in the profession and need not be merely an "academic exercise."

Any objective ranking of eminence in a field is subject to limitations imposed by the method used to determine the rankings. First, it should be noted that eminence, as measured in this study, was not equated with excellence. Eminence rankings based on frequency of citation can provide some information about the influence of persons and resources in a field, but they cannot capture the quality or the substance of the eminent contributions. The rankings in this article were not intended to identify the best scholarship in music education, rather the most influential. Second,

the opinions of the *Handbook*'s editor and its eight editorial advisory board members may have affected the eminence rankings through the selection of chapter topics and chapter authors. There are no absolute standards for evaluating whether the editor's and advisory board's selections adequately represented the scope of music education research. Some research topics and points of view may have been over- or under-emphasized in the *Handbook*, despite the broad participation of 71 chapter authors, 66 advisory reviewers, and 193 reviewers throughout North America and Europe. The reader should be cautioned that all measures of eminence are ultimately based on personal opinions, even if those personal opinions reflect a wide spectrum of opinion from many different authorities. The results of this study offer a rough guide, but certainly not the last word, on eminence in music education research in the early 1990s.

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