

The U.S. and Brazil are not so different after all

ESTADOS UNIDOS E BRASIL NÃO SÃO TÃO DIFERENTES, AFINAL

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abstract

The paper addresses research on music education in the United States and attempts to probe the nature and characteristics of the present and future research in the music education profession. The article describes the recent status of music as part of the arts education and its effect on research topics and methods. An extensive literature review, including original research, meta-analysis and reviews from various authors and themes are analyzed to verify characteristics and trends. Reflections are made on the characteristics found, including missing topics for the area, and the effect of research on the teaching and learning in music. No discernible trend or priority of topics was singled out.

KEYWORDS: research in music education, effects of research in music education, topics of research in music education.

resumo

O artigo aborda pesquisas sobre educação musical nos Estados Unidos, discutindo a natureza e as características de pesquisas na atualidade e para o futuro da área. O artigo descreve o estado recente da música como parte da educação artística e seu efeito sobre os temas e métodos de investigação. Uma extensa revisão da literatura, incluindo pesquisa original, meta-análises e revisões de vários autores e temas são analisados para verificar as características e tendências. Reflexões são feitas sobre as características encontradas, incluindo tópicos ausentes para a área, e o efeito de pesquisas sobre o ensino e aprendizagem em música. Nenhuma tendência clara ou prioridade de temas foi apontada.

KEYWORDS: pesquisa em educação musical, efeitos da pesquisa em educação musical, tópicos de pesquisa em educação musical.

introduction

Interpreting the meaning of events and data lies at the heart of research and usually there is no one “right” answer – even a preponderance of events can be misinterpreted due to bias, tradition, lack of information, or more. For example, students of history are often taught that Gutenberg’s use of movable type around 1439 had as its primary purpose the printing of the Bible. Priests were not handicapped by a lack of bibles as scribes were producing bibles, many of great beauty. It wasn’t until around 1517 and Martin Luther’s pressure that there was a demand for bibles for use by others than the clergy. Priests’ need in 1439 for the printing press was to print indulgences. Indulgences by the hundreds and thousands were required for religious and revenue purposes. A second interpretive research concern is the achievement gap in the U.S. between White and Minority students. Yes, there is a gap but one must **also** look at the improvement during the period covered by this paper. At the 4th grade level, Whites gained 12 points from 214-226 while Blacks gained 30 points, 170-200. At the 8th grade, Whites gained 5 points; Blacks 22 points. In 2008, 83 percent of Blacks had a high school diploma or equivalent. (Span; Rivers, 2012). Is the educational reform movement working? Maybe so¹.

I’ve been asked to comment on research on music education in the United States with some guesses on the meaning of our efforts for the present and the future. The most important conclusion is that there is no discernable trend or priority of topics. There are trends in methodologies, strategies, and age levels; these are not the focus of this paper. The assigned topic is extraordinarily broad at the international and national level as music has been incorporated as part of or synonymous with arts education. A September 2013 Brookings report *Toward Universal Learning: Recommendations from the Learning Metrics Task Force* (Brookings Institution and UNESCO, 2013) describes culture and the arts at three levels, early childhood, primary, and post-primary. The suggestions center on creative arts, self and community identity, awareness of and respect for diversity, and cultural knowledge. Students are to develop gross and fine motor skills by playing instruments, responding to and evaluating art, and using artistic forms. Teachers promote social and cultural pride, teach history and social studies from a multicultural context, foster understanding, respect and tolerance, encourage civic engagement, and promote peace. As with most policy statements, students are to also gain persistence, motivation, commitment, creative thinking, and originality (p. 23). The creative arts are described as understanding and expressing, creating, perceiving and responding in personal, social, cultural, and historical contexts. Direct teaching is designed to build appreciation for the cultural and artistic expression of others (p. 25). Only two research references are cited and these two focus on connecting music instruction with other subjects, namely *Critical Links: Learning in the Arts and Student Academic and Social Development* (Deasy, 2002) and *Champions of Change:*

1. The U.S. has a national achievement test given at 4th, 8th and 12th grade in mathematics and language arts. The language arts (or reading) is a 500 point test where mathematics has 300 points. I have used scores from the reading test for the example. The “cut score” for determining whether the student is advanced, proficient, or basic is set by experts based on the score they think students of this age should attain. There is no published “cut score”. The interest is in improvement as this is a low stakes test and does not impact on a student’s grade in reading issued by the teacher.

The Impact of the Arts on Learning (Fiske, 1999). As both publications were produced by the same organization, caution in interpreting the data is advised.

Because the United States, like Brazil, is undergoing a reform movement in education, much of the talent and effort by US professionals has been devoted to constructing standards that contain statements of “enduring understandings” and “essential questions”. The model being followed in formulating these understandings and questions was developed by Jay McTighe and Grant Wiggins in a 2005 book titled *Understanding by Design* (McTighe; Wiggins, 2005). Although these “new” standards have not been field tested, they were carefully developed under the watchful eye of the state arts supervisors (SEADE², joined by edTPA³, AATE⁴, and the College Board). Two commercial assessment companies, voluntarily supported by a varied collection of states are vying to construct the assessments for designated “core” subjects, which probably will be defined as math, language arts, science, and social studies – Smarter Balanced Assessment Consortium and Partnership for Assessment of Readiness for College and Career [PARCC] with these core standards built on *evidence-centered design* rather than *backwards by design*, the model for the arts. With evidence-centered design, alignment with the curriculum is built in from the beginning of test development, which likely means that the curriculum in “core” subjects will be more standardized than in the arts. The philosophical foundation for the arts standards suggests (1) the arts as communication, (2) the arts as creative personal realization, (3) the arts as culture, history, and connectors, (4) the arts as means to well-being, and (5) the arts as community engagement. The desired goal is artistic literacy, given this lengthy definition: “the knowledge and understanding required to participate authentically in the arts. Fluency in the language(s) of the arts is the ability to create, perform/produce/present, respond, and connect through symbolic and metaphoric forms that are unique to the arts. It is embodied in specific philosophical foundations and lifelong goals that enable an artistically literate person to transfer arts knowledge, skills, and capacities to other subjects, settings, and contexts”. Definitions become broad, indeed, when curriculum justification for music education is a subdivision of arts education, which means that research topics and research methods are also broad. Politicians have long discussed the arts as a collective discipline despite music, visual arts, dance, and theatre professionals thinking separately. The standards movement in the U.S. is forcing collective action in behalf of advocacy. The arts will be organized into process components of create, present, and respond. An enduring understanding for visual arts under create is “Creativity and innovative thinking are essential life skills that can be developed: with essential questions of “Can all people be artists? What conditions, attitudes, and behaviors

2. SEADE - State Education Agency Directors of Arts Education.

3. edTPA only stands for a process. It is a pre-service assessment program given to assess student teachers. It has been adopted by a number of states but might be considered to still be at the development stage as the video taping of student teaching is cumbersome and difficult to score.

4. AATE - American Association of Teacher Educators. Often written today as AACTE – American Association of Colleges of Teacher Education as two groups have merged.

support creativity and innovative thinking?” Create will have the most suggested grade level standards. With present, visual arts has as the enduring understanding “Artists and others select, present, and preserve objects, artifacts, and artworks in personal collections and/or portfolios⁵”. The essential question is “What criteria might be considered when selecting a work for a collection or portfolio?”⁶.

It is safe to say that the standards are influenced by the importance of standards in other subjects in the curriculum, especially mathematics, language arts, and science. My sense is that music education and music education research in the United States is influenced more by concerns of educators (often housed in Colleges of Education) than by musicians. The focus on devising new voluntary national standards is not due to any dissatisfaction with the 1994 standards. The argument is that education has changed in the past 20 years, but has it in music education? The standards movement in education does allow the profession to develop grade level standards and suggested cornerstone assessments. There will certainly be many, many, more standards. *The British Journal of Music Education* is a good resource for research, and is influential. Some excellent research is conducted in Australia, and there is an impact of Australian results on the thinking of American researchers. In discussing achievement, one cannot ignore the work of the New Zealander, John Hattie (2007, 2009, and 2014 with Yates), who reviewed some 800 meta-analyses of some 50,000 studies involving more than 200 million students. The assumption in combining studies into a meta-analysis, first mentioned by Gene Glass in 1976 and appearing originally in print in a 1980 publication by Smith, Glass and Miller (1980) is that one need not **subjectively** identify great studies—that by combining the results of good and less good research the average findings will be closer to the truth. Hattie found the typical effect size was .40, or an achievement increase of about 13% on a norm-referenced test. An assumption is that research results greater than .4 were “winners”. Some “winners” of interest to us include: self-reported grades, Piagetian programs, formative evaluation, teacher clarity, reciprocal teaching, feedback, having good relationships with students, spaced versus massed practice, direct instruction, problem solving teaching, study skills, and mastery learning. “Disaster”, meaning research results less than .4 and often negative influences on learning included summer vacation, television, web based learning, problem based learning, co-team teaching and out of school curricula experiences. Hattie has other “disaster” findings in teacher education, i.e. teacher subject matter knowledge and mentoring. I’ll return to these in discussing research in higher education. The importance of these findings for us lies in interpreting results in music education that deviate from these general norms. There are not many meta-analyses in music. One needs to think carefully about ability grouping when Hattie’s 500 studies on this topic had a low effect size of .12. Hattie ranks some 138 interventions, many, however, are either

5. Personal collections and portfolios are not the same. Portfolios are more structured in terms of the course objectives.

6. The revised national standards for the arts will be released on June 4 2014. This definition is taken from the definition of artistic literacy that the four arts groups used in developing the new standards. One can find it on the web pages of the various arts organizations.

tied in his rankings or reasonably close. For example rank 109 (teacher personality) has an effect size of .19. Mentoring, ranked 120, an effect size of .15.

Educators tend to focus on a few selected problems, e.g. Hattie found only 12 studies on peer influences but over 5000 research studies on teaching strategies.

Hattie used his strategy of combining research results in investigating the power of feedback in 2007. From his 500 studies, he identified 196 on feedback which had an average effect size of .79 (twice the average research intervention effect). Video, audio, or computer assisted instructional feedback was most powerful; programmed instruction, praise, punishment and extrinsic rewards were the least effective for enhancing achievement. Feedback could produce negative results unless the questions were: Where am I going, How am I going, and Where to next? (Hattie; Timperley, 2007).

Person-centered variables, based on 1000 articles and 119 studies, found mean correlations of .31, about average for interventions. Relationships were most important for affective and behavioral outcomes (Cornelius-White, 2007).

Teachers desire research that addresses practical issues like long-term achievement results, the ease of a teaching method, the experiences of the students, and a comparison with other teaching methods or strategies. Too much research reported in our music education publications is biased and focused on "proving" something, omitting any discussion of the strengths and weaknesses of various methods (Van Velzen, 2013).

Have U.S. researchers added new knowledge from multiple studies since the work of Hattie? I can mention a few of interest which may or may not be among the 130 different research interventions that Hattie investigated. Multiple educational reforms have been tried in the U.S. since the launch of Sputnik (but that's another paper). One "solution" was a longer school day. Some 15 empirical studies have been conducted on its effect since 1985 (Patall; Cooper; Allen, 2010). The investigators found (1) the research weak for making strong causal inferences, and (2) outcomes other than academic achievement have not been investigated. Based on their weak findings, a longer school day benefits those students most at risk of failure; further conclusions on lengthening the school day wait upon studies with stronger research designs. Site-based management was another educational reform following Sputnik with little or no supportive research.

Twenty-five meta-analyses encompassing 1055 studies have investigated the impact of computer technology on learning with effect sizes between .33 and .35, what Hattie would consider average. A number (19) of the analyses had effect sizes of less than .1 with one meta-analyses finding negative results for the use of technology (Tamin et al., 2011) A second study on the impact of computers in the classroom based on 45 research studies found an advantage of .33, about average for a research intervention. The larger effects occurred when the instructional time was longer for computer assisted instruction than for the control groups, when graduate students were participants and, when there was embedded assessment. Thus, doubt remains about computer technology (Sosa et al., 2011).

higher education

Policies in teacher education indicate that professional development and mentoring can greatly improve teaching and learning. There appears to be little confidence that colleges of education can meet the challenge of better-prepared teachers. Fifteen empirical studies have been conducted on the impact of induction and mentoring since the mid-1980s. Of these, most interventions had positive results on keeping students on task and successful classroom management. The results on improved student achievement were mixed, generally positive, with one large well-designed study on large, urban, low-income schools, finding positive effects on student achievement but no effects on teacher retention or classroom practice (Ingersoll; Strong, 2011).

Two years later, Waitoller, F. and Artiles, A. (2013) reviewed all of the research on professional development since 2000 and found that the professional development research has produced a limited and fragmented knowledge base with few strategies that can be generalized. Success, when found, depended upon individuals in selected schools. Again, policy makers are championing a low cost strategy that remains unproven in improving teachers. The RAND Corporation teamed with two British scholars to investigate complexity theory for professional development in higher education; they found that teacher learning is affected by prior knowledge and new knowledge emerges from the interaction of the teacher and the learning system. Thus, it is the interaction and intersection of knowledge, beliefs, practices, and experiences that constitute a teacher's individual orientation to a learning system---conveying many implications for improving college teaching (Opfer; Pedder, 2011).

Grade point averages in teacher education are poor predictors of teacher competence. Results from 123 studies yielded 715 effects sizes on GPA⁷, teaching level, and service level. The research yielded results that were at best modestly related to teaching competence. Performance in preparation programs was a better predictor of teaching skill. To find 123 studies with sufficient data to compute effect sizes, D'Agostino and Powers (2009) had to start with 500 manuscripts, an indication that much research in education is below par!

Many of us who have taught in large institutions believed in placing student teachers with the "best" cooperating teachers in the state without wondering to what extent learning in an ideal situation (with limited teaching responsibility) transfers to the student's first job. The answer is that in general, it does not. A review of the research in the Cochran-Smith and Zeichner (2005), *Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education* also found little concrete evidence of the influence of student teaching on teaching practice. The complexities of context and culture as well as differences in students are formidable challenges. Anderson and Stillman (2013) reviewed the literature on field experiences published in the past two decades and found little pre-service work contributing to success in urban and/or high-needs schools. Interesting and very positive laboratory type field experience research, can

7. GPA - Grade Point Average.

be found in three or four funded situations where beginning teachers in Boston are placed in schools and classes where they will eventually be employed – with some three years of experience working with the master teacher in the classrooms and with students similar to those they will eventually teach (Solomon, 2009).

Little evidence is available that professional development is effective. The focus here is on the development of knowledge, and most programs tend to overlook the implications of context and ontology in learning (Webster-Wright, 2009).

Presently students in teacher education have the lowest SAT⁸ scores in the university, often the bottom third. Recommended policy to reform education in the U.S. suggests that in 2020 only those individuals who score in the top 1/3 of all test takers of the SAT (or comparable test) will be admitted to a teacher education program, candidates must have a GPA of 3.0 or above, and selected personal characteristics (Ginsberg; Levine, 2013). This desired policy change may be infeasible as enrollments in teacher preparation in California declined to 26,466 in 2012, down from 34,838 a year earlier, and a decline of 66 percent from a decade earlier when 77,700 students were enrolled (Carnegie Perspectives, 2013).

Many employers presently use a commercial instrument, The *Gallup Teacher Perceiver Interview*, to select teachers to hire. Twenty-four studies find a modest relationship of .28 between scores on the Interview and “some” measure of teaching quality. The Interview appears to measure aspects of teacher quality by capturing beliefs, attitudes, and values that school principals value; not those attributes most relevant to pedagogical effectiveness (Metzger; Wu, 2008).

Researchers have reason to be surprised that the education of music education teachers and research in music education has followed issues in general education. Wilson, Floden and Ferrini-Mundy (2001) found little definitive research as to the kinds or amount of subject matter preparation deemed necessary for the public school teacher of whatever ilk – even in mathematics prospective teachers had weak knowledge of concepts and poor reasoning skills. Many music teacher education programs consist of music courses that consist of 50 percent or more of the curriculum. No research directly assessed the relationship between subject matter *knowledge* and student learning. Subject matter study by prospective teachers beyond four to six courses had little effect on student achievement. They found no research that directly assessed what teachers learned in their pedagogical preparation that related to student learning or teacher behaviors. Whether student teaching was valuable depended on the specific intent and characteristics of the field experience; and the positive research was based on sample sizes ranging from five to fifteen. As might be expected, the better university or college attracted the better students. The research findings on alternative certification is mixed. The criticism of Teach for America, a program that attracts top non-teacher education students at elite universities

8. This has stood for Scholastic Aptitude Test but in its new version, it is called Scholastic Achievement Test.

to teach in urban areas is criticized for excessive turn-over. A 2014 study of North Carolina teacher certification (Henry et. al., 2014) found that teach for America teachers were superior at teaching STEM⁹ subjects. Turn-over is a weak criticism in 2013 as about half of the regularly certified teachers leave after five years. Half of young lawyers leave their firm within three years (American Bar Association, Young Lawyers Division, 2000). Americans are known for having several career patterns by the age of 35. Little is known about the effectiveness of methods courses or educational foundation offerings on teacher competence.

In a larger study funded by AERA¹⁰ and the Carnegie Foundation, a sort of self-study, few answers pro or con provided information about effective teaching (Cochran-Smith; Zeichner, 2005). The research reported in this compendium also found a weak relationship between teacher ability and student achievement. One study in mathematics found that teachers holding advanced degrees produced lower growth in mathematics achievement. The claim that teachers need to know well the subjects they teach has strong intuitive appeal, but exactly what they need to know to teach well at various levels remains a topic for debate. In addition, information is lacking as to how the study of concepts from psychology, sociology, and other arts and sciences should be taught that would maximize their value for the practice of teaching. The section of the AERA report describing the research on student teaching and methods courses concluded that there were no answers to a variety of questions: Does it matter if there are no field experiences? Does it matter where methods courses are located within the curriculum? Does it matter whether the courses are located within the College of Education or the College of Arts and Sciences like the school of music? Do general methods have more impact than content specific methods? Gloria Ladson-Billings (2005) describes student teaching as an artificial experience conducted in an artificial environment: "it's controlled and everybody know it. The supervisor shows up and everything is a performance. It's staged. It is so context dependent that it has little chance of transferring to a different teaching situation". Mary Kennedy (1999) looked at the type of educational research to determine whether type made any difference in its usefulness to teachers. She reviewed experiments, ethnographic narrative, survey, disciplinary, and conceptual analysis and found no advantages for any type and, in general, little research of value for teachers. Randomized experimental research reported in the *American Education Research Journal* from 1983-2004 decreased from 33 to 4 percent according to Hsieh et al. (2005).

Educators have recently focused on qualitative research in hope this approach would be more informative. Music education researchers have recently over-emphasized qualitative research. It is an important research strategy most useful when one has preliminary quantitative data and wishes to obtain a deeper understanding of the results. It is also useful to probe the emotional outcomes of a musical experience. Many qualitative studies consist of the researcher

9. STEM - Science, Technology, Engineering and Mathematics.

10. AERA - American Educational Research Association.

spending considerable time in a classroom and reporting on student and teacher comments and reactions. Such research benefits primarily the researcher and constitutes little more than a type of professional development. One might suggest that many qualitative researchers believe it to be an easier strategy than quantitative research when it is actually more difficult when conducted properly. Qualitative research must be replicable (Nosek, 2014). Catherine Snow (2001) found that teachers overgeneralize findings from classroom ethnographies as these are based on the best teachers. Other ethnographies are also not helpful as they show teachers as incompetent, indifferent, and dogmatic. These research findings are not surprising considering that, as early as 1993, Wang, Haertel, and Walberg (1993) reviewed the research literature seeking a knowledge base for how students learn. They identified more than 11,000 relationships among teaching practices and cultural factors but found no defensible knowledge base, concluding that home environment and instruction were more influential than educational policy, school organization, or any demographic factor.

Music educators cannot afford to be smug, as the research data that we can add does not justify present curricula requirements. Jones (2008, p.74) citing Paul Doerksen's 2007 research reports that Doerksen identified 34 different certification tracks for music teachers. Our teacher education programs differ more than the competencies of our graduates. Admittedly, other than the subject matter requirement in music, the preparation of teachers is controlled by a College of Education or state department requirements. What data we have must be interpreted and therein lies the problem. What does it mean to "have taken" a year of music theory? At one institution the class is made-up primarily of music education majors but, at a conservatory, the class might have only a few music educator majors. Is sight-singing and dictation integrated or taught separately? The core content of any elementary music methods course is unpredictable: some survey multiple methods, others focus on one sequentially formulated method, or a third consists primarily of observation in the schools and class-time devoted to discussions of what was observed.

David Steiner (2004) investigated the content of education courses at fourteen prestigious institutions in the U.S. and found that course titles and catalog descriptions told him little about expected student competencies. A present dispute in the U.S. is how the National Council on Teacher Quality ranked university based teacher education programs. A quick inspection of the data collection indicates sloppy research on the part of NCTQ¹¹ (Fuller, 2014). Disciplines, if music education is a discipline, usually have a common core of knowledge and practice, and one can expect this core to be applicable to most individuals seeking validation in that discipline – with flexibility to accommodate special situations. There is also the matter of dispositions for prospective teachers and a strong emphasis in general education when educators are expected to work cooperatively with other teachers across the curriculum.

11. NCTQ - National Council on Teacher Quality.

The controversies within music education are too numerous for discussion here. Does a performance audition on a major instrument provide sufficient data on one's musicality? Are there advantages to competition for chair placement and various honors, and does the rationale for competition and challenges apply to the public schools? What research is needed and what are the priorities within any research agenda? Is there an appropriate sequence to course work and could all course-work in education and music education be elective depending upon student competencies and interests? How will you know?

Present teacher certification tests are not challenging nor is the examination required for National Board Professional Teaching Standards discriminating. The Carnegie Foundation and Lee Shulman (2004) have promoted the idea that there is a scholarship of teaching – an idea that is not likely to set well with the musicologist who has his or her own definition of scholarship. This idea has morphed into “pedagogical content knowledge” a competence advocated by Deborah Ball (Ball; Forzani, 2009) in her work with math teachers but a procedure found lacking sufficient reliability to be included in the Bill and Melinda Gates study on evaluating teachers, the MET project (2009-2012). There is also (or was) an international organization on the Scholarship of Teaching and Learning. Marcy Singer-Gabella (2012) argues that for such scholarship to become effective, faculties in schools of education must take the time to establish shared understandings of the nature and possibilities of this kind of scholarship, clear expectations regarding quality, an infrastructure to support development, review, and feedback.

Comments of SoTL¹² Reconsidered appeared in Arts and Humanities in Higher Education (Felton; Clark; Parker, 2013) as reviews of a book by Hutchings, P; Huber, M.; Ciccone, A. (2011), titled *The scholarship of teaching and learning reconsidered: Institutional integration and impact*. Peter Felton reviewed from the American perspective, Jennifer Clark for Australia, and Jan Parker for the British. They agreed that the separation of academic content from pedagogy is unwise.

Educators are also discussing and possibly assuming responsibility for teaching problem solving, critical thinking, self-assessment, and other complex subjects. John Hattie's work will be helpful. Citing David Dunning and his own work, Hattie finds from numerous studies that when compared with objective indices, self-assessments are not only poor but frequently turn out to be less accurate than assessments made by other people. Students' dormitory peers were better able to predict just who would do volunteer work in the future than were the individuals themselves. Dunning's work spans not only college students but industry, office work, military training, and medical practice. In athletics where feedback is common (and probably in music performance), self-knowledge and performance measures correlated a strong .47, but for social skills, the correlation dropped to .17, a huge difference (Hattie; Yates, 2014, p. 231). Dunning found that top students scored more highly than they had anticipated-estimating their scores

12. SoTL - Scholarship of Teaching and Learning.

at 33 when their average was 35. The bottom students estimated their score on an exam as 30, but scored only 22.

Self-assessment is championed with few research results. Nicholas Bowman (2010) used a longitudinal study with 3000 first-year college students finding across cognitive and non-cognitive outcomes, a correlation of about zero.

The research on teacher retention is not surprising in identifying resources, the teaching situation, and administrative support – in other words the work conditions determine the willingness of teachers to stay in the profession. This is based on 34 studies and the possibility of 63 factors (Borman; Dowling, 2008).

Are there any advantages to the mandated and high-stakes assessments? Conducting a critical analysis of some 76 effect size estimates, Jaekyung Lee (2008) found a modest effect on average but no effect on racial achievement gap.

Direct instruction continues to be effective. 37 experimental and quasi experimental studies published between 1996 and 2006 found that inquiry-based instruction varies greatly but still students learn. Teacher-led instruction had mean effect sizes about .40 larger than those with student-led conditions (Furtak et al., 2012).

The British who have done excellent research in formative assessment have discovered that providing feedback to students in higher education needs to be further studied and a framework of seven specific areas researched (Evans, 2013). Two Canadians (Amundsen; Wilson, 2012) reviewed more than 30 years of published literature in higher education, finding that one could draw only tentative and weak conclusions on the effectiveness of higher education. They suggested that research is needed in six areas: skill, method, reflection, disciplinary, institutional, and action research or inquiry.

Teacher clarity is supported by most research. Students must understand instructional goals and what must be done to attain those goals. Conducting a meta-analysis of the research on goals in middle and secondary schools, a Harvard professor (Rolland, 2012) found that the difference between performance and mastery goals required considerable teacher support, and that most studies were flawed. Extrinsically focused classroom goal structures had a negative effect on academic achievement.

As powerful as meta-analysis is, and accepted in education as the gold standard, an investigation of 56 such studies found that problem formulation and data collection are generally well done but much improvement is needed in data evaluation and analysis. Some comfort can be found in that interpreting results of related research, appraising the value of related research, and using previous research in interpreting one's own findings are almost universal weaknesses in music education research. Progress is slow when one blindly follows the literature in publications. Some 5206 meta-analysis articles have been published since 1976 in education and social science, (Ahn; Ames; Myers, 2012) and yet the weaknesses remain.

Meta-analyses have been conducted on the value of parent involvement with homework, finding that it is helpful at the elementary and high school level especially for verbal achievement

outcomes. The results from 22 studies indicates a negative outcome with middle school students and with parent involvement with math at all levels (Patall; Cooper; Robinson, 2008).

the possible

Recent randomized experiments have found the exercises that target students' thoughts, feelings, and beliefs in and about school produced large gains in student achievement and reduced gaps in later studies. These, however, have not been scaled, have been only at the laboratory level, and will require coordination between psychologists and teachers. They do not teach students academic content or skills, or improve teacher training. They do, however, allow students to take advantage of learning opportunities already in the classroom (Yeager; Walton, 2011).

Alignment research is necessary before any assessment can be initiated on core subjects. Specific goals differ by school district requiring curriculum alignment. Traditionally, subject matter experts have looked at test items and verified that they are appropriate. This procedure is inadequate for high-stakes testing.

Presently there are three popular alignment methods, the Webb, Achieve, and Surveys of Enacted Curriculum (Martone; Sireci, 2009). As Webb's methodology is the most common with concern for content focus, articulation across grades and ages, equity and fairness, pedagogical implications, and system applicability, a few descriptive words are appropriate. There are six subcategories for analysis: categorical concurrence, depth of knowledge, range of knowledge, balance of representation, structure of knowledge, and dispositional consonance. Categorical concurrence is similar to traditional content validity and a minimum requirement. Dispositional consonance is an overview. Unfortunately, no research was identified comparing the three alignment methods in field trials.

Relatively few studies have examined the relationship between computer self-efficacy and learning outcomes. Both behavioral and psychological factors are positively related to computer self-efficacy with behavioral modeling required. Only a few studies have indicated that computer self-efficacy is positively related to learning outcomes. Other studies have suggested that learning outcomes change with knowledge acquisition (Moos; Azevedo, 2009).

Individuals in the arts are concerned about the pressures of examination on the curriculum and on students. Much of the research on this topic and most topics is conducted with young children; teachers of 2nd and 3rd grade students are more cooperative or have more flexibility in their teaching. One study (Plank; Condliffe, 2013) was conducted over a two year period, finding less instructional support in the classroom when preparing for the tests. Emotional support and classroom organization were not impacted by preparation for tests. The study used the observational system, CLASS, which is one of the accepted strategies. Data on using CLASS can be found in Hamre, B. et al. (2007)¹³.

Only about half of the test questions are aligned with accepted core curriculum as measured by Surveys of Enacted Curriculum and as much as 27% of the test content covers topics not mentioned in the corresponding standards (Polikoff; Porter; Smithson, 2011).

The evaluation of teachers is a major topic, and many arts professionals believe that not being included in these evaluations will diminish the importance of the arts in the curriculum. There is a separate body of literature on “hard to measure” subjects based on the lack of accepted quantitative measures in any of the arts. Some in music believe that the subject matter goals are primarily process goals and not products. Process is troublesome as there may not be any “better” or “poorer” processes in the teaching of music, or the processes might differ by community or grade level. There is the story reportedly by Kushner who was hired to evaluate a music program in a Hispanic area of Boston and he wanted parent involvement. Parent interest was in music performance for holidays and special events---not the specified learning outcomes adopted by the school administration. A brief discussion of the problems with value-added assessment of teachers can be found in an article by David Berliner (2013). A more detailed discussion can be found in Colwell, R. (2014), *The black swans of summative assessment*. Value-added measures in music education would require individual, not classroom, assessments as within class variance of prior achievement and talent is greater than that between classes.

The literature on the advantages of arts education is huge, identifying advantages for minorities, handicapped, and urban and rural students. One source is Chappell, S. and Cahnmann-Taylor, M. (2013). Another source (Gadsen, 2008) is in the annual publication *Review of Research in Education* of the American Educational Research Association, an arts chapter in Volume 32.

In the U.S., music education research is influenced by concerns of educators. One finds research influenced by concerns from the discipline in the British publication, *Psychology of Music* with topics such as Does Timbre Affect Pitch, Music as Emotional Self-regulation, The Effects of Improvisation on the Development of Children’s Creative Thinking, with some studies merging the two areas of concern to teachers. Also see in *Psychology of Music*, Evans; McPherson; Davidson (2013). The authors, using an on-line questionnaire, concluded that students ceased music instruction due to diminished feelings of competence, relatedness, and autonomy. McPherson, an Australian has and is conducting longitudinal research in instrumental music.

One standard that has been discussed but not enacted is the Opportunity to Learn standards. The National Governors Association has recognized its importance in achieving the content standards, but any formal action would require funding, which the federal government was unwilling to do using the excuse that education was a state responsibility.

13. Building a science of classrooms: Application of the CLASS framework in over 4000 U.S. early childhood and elementary classrooms. Charlottesville, VA Center for Advanced Study of Teaching and Learning. <http://fed-us.org/sites/default/files/BuildingAScienceOfClassroomsPiantaHamre.pdf>

music education research

Professional organizations in music have tended to leave policy issues to private foundations, the National Endowment for the Arts, and an active organization, Arts Education Partnership. Since at least 1960, there has been a deliberate effort in the U.S. to restrict any government support for the arts.

With support comes control and artists and arts organizations desire artistic freedom more than any financial support. This separation is spelled out in the bill that established the National Endowment of the Arts and Humanities.

The context of the arts scene in the U.S.

Congress mandated a survey of Art and Industry in 1884 (an economic study) and followed up in 1985 with a call for a study of the state of arts education based on a concern for a lag in culture. The 1988 report was authored by Frank Hodsoll, (1988) chairman of NEA¹⁴, and listed four purposes for arts education: provide a sense of civilization, foster creativity, teach effective communication, and to provide tools for critical assessment of what one reads, sees, and hears. Hodsoll suggested that the arts are in triple jeopardy: they are not viewed as serious; knowledge itself is not viewed as a prime educational objective; and those who determine school curricula do not agree on what arts education is (p. 7). *The Power of the Arts to Transform Education: An Agenda for Action* (James Wolfensohn, 1993) was published in 1993; and in the same year *Perspectives on Education Reform: Arts Education as Catalyst* by the Getty Foundation.

The Hodsoll and Wolfenson publications were so successful that publications advocating the arts were viewed as important in supporting the arts as a core subject, cleverly orchestrated in 1994.

In 1994, the NEA and the Department of Education cooperated on publishing *Arts Education Research Agenda for the Future* (National Endowment for the Arts, 1994). These two agencies wanted to bring together music, dance, theatre, and visual arts, to identify issues that would form the basis for research over the next 10 years. The trends identified were: the increased diversity of the student population, the development of education standards, and the use of media and technology (p. 3). The research areas were to be curriculum and instruction, assessment and evaluation, and teacher education. The suggested questions under these topics were so broad as to require major funding. Curriculum questions included: How do various curriculum designs and processes contribute to comprehensive and cohesive arts program? What arts curricula and instruction are effective? How do arts educators connect arts instruction with instruction in other subjects? (p.13). Assessment questions included: How do we expand the variety of assessment techniques, including method, practices, and instruments, to capture a range of achievement in the arts? (p. 24) (A policy and not a researchable question?). And for teacher education: How are teachers taught to conceptualize and integrate knowledge and understanding about

14. NEA - National Endowment of the Arts.

the arts, student development and pedagogy? How does such teacher preparation influence student learning in the arts? (p. 32).

In 1995, the Endowment published *Schools, Communities and the Arts*, a compendium of “some of the most useful” arts education studies and their results.

Money continued to flow for advocacy/policy publications. A survey of the arts in public elementary and secondary schools was published by the office of education in 1995 and again in 2002. The reports are labeled *Fast Response Surveys* which means they have the possibility of a large error.

In 1997, Arts Education Partnership with support from NEA, the department of education, Getty¹⁵, NAEA, and NAMM¹⁶ (Cawelti; Goldberg, 1997), established research priorities in two areas, student learning and policy development. The research questions were only slightly more specific. In student learning, questions included the effects of arts education on children from birth to age 5; effects on other academic areas; on preparing students for successful work and careers; on the academic performance of at-risk student populations; and on student understanding and appreciation of the diversity of cultural traditions in America. Policy questions focused on knowing the condition of arts education; attitudes of the public, parents, and administrators; and case studies of successful programs. The chief author, Gordon Cawelti was supportive of arts education; however, he was for 20 years the executive director of the Association for Supervision and Curriculum Development.

American Canvas (Larson, 1998) was published by the National Endowment around 1998 and described selected arts programs

1999 brought *Champions of Change: The Impact of the Arts on Learning* from Arts Education Partnership and the President’s committee on the arts and the humanities and edited by Edward Fiske. This publication reviewed research studies indicating that students in the arts were more successful in other school subjects; that the arts reach students not otherwise being reached; that they transform the environment of learning; and that the program Learning In and Through the Arts examines the issue of learner self-perception.

In a more focused study with access to complete data based on 15,630 students Kenneth Elpus (2011) found that music students do **not** outperform non-music students on the SAT and that 36.64% of the US class of 2004 (1,093 students) graduated with a least one course credit in music contrary to the perception that students do not continue into high school.

Gaining the Arts Advantage: Lessons from School Districts that Value Arts Education (Fulbright; Deasy, 1999) by AEP (Arts Education Partnership) and the President’s committee on the Arts and the Humanities appeared in 1999.

15. Getty Foundation is the publisher. At one time it was known as the Getty Grant Program but the Getty Foundation is very big in liberal arts and helped fund the national standards and the last National Association of Educational Progress test in the arts.

16. Terry Foundation; NAEA - National Art Education Association and NAMM – National Association of Music Merchants.

The Performing Arts in a new era (McCarty et al., 2001) was written by Keven McCarthy, Arthur Brooks, Julia Lowell, & Laura Zakaras and funded by Pew Charitable Trust and conducted by RAND suggesting that a national arts policy is presently infeasible.

Lifelong Journey: An education in the arts. Learning through the arts was published by the endowment in 1994 (Larson, 1994); *Envisioning arts assessment: A process guide for assessing arts education in school districts and states* (Pistone, Nancy, 2002) by the Arts Education Partnership in 2002; *Arts & Economic prosperity: The economic impact of nonprofit arts organization and their audiences* published by Americans for the arts (2002) and funded by America Express and the National Endowment. The small connection between education and national economics has been explored by David Labaree (2010) in *Someone has to Fail: The Zero-Sum Game of Public Schooling* (2010).

Critical Links: Learning in the arts and student academic and social development (Deasy, 2002) was a 2002 publication designed to provide examples of research that supported many of the claims of the Arts Education Partnership. Some 15 music studies of varying quality are included. One strength is the use of meta-analysis. Butzlaff's interest was in whether music can be used to teach reading (p. 106-107). He found a positive correlation but an effect size of only .11. Lois Hetland (p.114-115) was interested in whether music enhances spatial reasoning. With 15 studies, she performed three analyses. The first on spatial-temporal tasks, the second on a measure of general intelligence, and the third on spatial-temporal reasoning measures. She found an effect size of .37 on the first but little on the other two (there is likely a typographical error in her data). Music instruction with notation was more effective than instruction without. Jane Standley (p.128-129) used meta-analysis in 1996 investigating music therapy objectives. She identified 98 studies and computed 208 effect sizes. Music was a stronger incentive with special education students than candy, praise, or juice.

The research studies selected reflect topics of short-term interest—the Mozart effect and spatial-temporal learning. The focus was on therapy and how music affected studying and learning in other subjects.

The research findings are not particularly strong but inclusion in *Critical Links* provided more visibility than is customary for doctoral dissertations.

The Arts and school reform: Lessons and possibilities from the Annenberg challenge arts projects (VUE, 2003)¹⁷ and Wolf, D. Lynch, R. *The arts and education: New opportunities for research* (2004) published by the Arts Education Partnership and written by Stevenson and Nelson are of political interest.

Stevenson and Deasy (2005) published with Arts Education Partnership, *Third Space: When Learning Matters*.

17. VUE stands for Voices in Urban Education and is published by the Annenberg Institute for School Reform at Brown University. I cited issue number 1, Spring 2003.

The Wallace Foundation and RAND (Lowell; Ondaatje, 2006) published *The Arts and State Governments: At arm's length or arm in arm*. AEP followed up with *Arts integration: Frameworks, research & practice: A Literature review* by Burnaford, G. in 2007; The Dana Consortium Learning, Arts, and the Brain (Gazzaniga, M., 2008) in 2008. Cultivating demand for the arts: Arts learning, arts engagement, and state arts policy (Zakaras; Lowell, 2008) was funded by the Wallace Foundation and conducted by RAND research in the arts. State arts policy: Trends and future prospects (Lowell, 2008) was also funded by the Wallace Foundation and conducted by RAND research in the arts.

Nick Rabin and E.C. Hedberg (2011), with support from the National Endowment for the arts published *Beyond attendance: A Multi-modal understanding of arts participation*. Nick Rabin is a scholar in the artists in the schools (now called artists in education) movement. Novak-Leonard and Brown (2011) *Reinvesting in Arts Education: Winning America's future through creative schools* was also published in 2011. *Building Arts Organizations that Build Audiences: The Wallace Foundation conference* (Parker, 2012), indicates Wallace's interest in building audiences and follows-up on a 1997 publication of the same title.

In 2013, the National Endowment (2013) published *How a Nation Engages with Art: Highlights from the 2012 survey of public participation in the arts*. Advocacy organizations including the NEA tend to emphasize the negative to bolster arguments for support.

Because the standards, present and projected, are written for the arts, one can assume that there are common outcomes and that, in some instances, one art form can substitute for another – at least in some of the important competencies. I have selected a few of these commonalities for which research data exists. Because of a lack of federal funding, there are fewer ambitious research projects and foundations have tended to support advocacy as suggested by the list of publications rather than the improvement of instruction. The arts are of sufficient importance that parents and out-of-school experiences often suffice when schools fail. Elliot Eisner in reviewing research in visual arts found that the average research treatment was 45 minutes per subject and that more space in the literature was devoted to the finding than to a description of the treatment. Much of the research has been on use of art objects and/or artist performers as opposed to the solving of instructional problems. Fortunately there has been a history of successful teaching of some of the expected outcomes and teaching need not be blind-sided. The arts are marked by attention to detail; subtleties in looking, seeing, and hearing are of supreme importance; symbols and metaphors must be understood and requires a solid foundation in general education. The research sources on these common outcomes can be found in *Handbook of Research on improving student achievement*, 3rd edition (Cawelti, 2004) with music research on pp. 39-85. Among the common findings across the arts including music are the following.

- Correct use of the body is necessary for achievement of acceptable performance. Posture must be erect, balanced and relaxed whether sitting, standing, or moving. Students can learn to sing incorrectly as well as correctly. Teaching improves performance and prevents bad habits that are difficult to identify and correct. Related to posture is the use of psychomotor principles,

especially those that avoid tension. (Not all large muscles develop before small muscles).

- Direct instruction that includes modeling leads to greater production/performance skill but also to improvement in understanding the art form. Because the arts depend upon “doing” in creating and performing direct teacher intervention and modeling is more successful than discussions.
- Chunking or grouping by units to form pitch and rhythm patterns and possibly changes in harmonic structures lead to improved musical memory.
- Interdisciplinary learning is required to place music within a culture or society. Categorization of objects by concepts such as style, historical period, subject, medium and comparing and contrasting helps understanding.
- Immediate feedback to individuals whether performing alone or in a group is superior to delayed, group, or no feedback. The need to reflect on the work as a whole is also important but a different intervention.
- Individual experiences lead to better understanding and higher level skills than experiences that involve only group experience.
- Questioning techniques lead to a deeper understanding of the teaching objective and relating the art experience to one’s own life. Experience and practice in questioning is important.
- There are commonalities in the use of strategies with special education students, in the use of symbols, and metaphors, and in visual and aural thinking.
- Student creations in all art forms usually improves self-concept and peer relationships as well as contributing to a wider and deeper imagination.
- Music teachers must be flexible. Voice classification seems important to many teachers with worries about the changing voice. Michael Spyres (2013) had parents who were both music teachers and they agreed with his teachers who had him classified as a baritone. He was 28 and studying in New York when his teacher said “Let’s try to find your actual sound”. Spyres suggests it took him six years before he was comfortable as a tenor. “Everyone I’ve talked to who made that transition says they initially want to go back to being a baritone. It’s easier to raise the throat, and you’re able to feel you’re in control of the voice because the resonant place where the baritone rings out are the places you can really feel in your throat. A tenor has to lock it into place – it’s a weird sensation” (p. 10). Maybe voice classification is not a critical teaching point.

Dr. Montandon¹⁸ has suggested that I address a few futuristic topics for research in music education. She has set the bar very high. I thought that the suggested topics were

18. Nota do Editor: O autor se refere a sugestões da Profa. Maria Isabel Montandon, da UnB, quanto aos temas a serem abordados no artigo. (Note from the editor: The author refers to the issues suggested by Professor Maria Isabel Montandon from UnB regarding the themes discussed in the article)

researchable as I have considerable faith in research. I looked at the doctoral dissertation topics for at least the past ten years. I looked at the articles published in at least ten music education research journals and at the topics of addresses given at music education meetings. There seems to be no pattern. I then contacted journal editors in the UK, Australia, and the U.S. as to the topics and content of articles submitted to them, published and unpublished to them; they also could not perceive any priorities in the materials submitted for consideration. They publish the best and most interesting material submitted. I was pleased that most editors suggested that the *MENC Handbooks on Music Teaching and Learning* represented the best research resources that we have. The Handbook authors are not only noted authorities on selected topics but have seriously researched the topics. It is interesting that authors can interpret research findings from a variety of sources and even if the research itself is not particularly distinguished, when the pieces are assembled by those who can distinguish meaning from fluff, the profession does have a base---sort of the same philosophy as meta-analysis except done by humans thinking rather than statistics. I would argue that compiling what we know (as Peter Webster and I did in the handbooks on music learning (Colwell; Webster, 2011) with the chapters on music listening, music reading skills, movement, singing, musical development, motivation was a focus on important topics. Incidentally in the area of motivation, research informs us that a positive comment to an entire class – I like the way you sang today – is not helpful. We also selected self-regulation, music cognition, and learning theories as fundamental to teaching, learning, and research. What impresses me about chapters in our handbooks are the references – almost always substantive. However gaps in our knowledge base remain. Peter Webster selected the topic of constructivism and we needed a balance to this strategy. When our author declines, I was “elected” to write the chapter on direct instruction. I learned that transfer of learning and critical thinking are closely related to direct instruction. Critical thinking is very difficult to teach. The California State Colleges initiated a one semester course in critical thinking that was a failure. They found that it took all four years for students to improve. Transfer of learning is also more complex than most think. Identical elements do transfer; most other elements do not. The experienced teacher knows that having performed one piece by Benjamin Britten doesn't mean that learning a second Britten piece is all that much easier (Colwell, 2011).

I am not impressed with trendy topics. The use of multicultural and/or popular music is one such trend. The materials used are of some importance but all materials have to be organized to be meaningful and for students to understand. Taxonomies remain important and one senses that learning experts involved with standards and reform continue to think in terms of the Bloom cognitive taxonomy (1956) and its revision by Anderson and Krathwohl (2001). A teacher can introduce the world's musics to children but in terms of understanding musics, more is required than an introduction, an introduction or survey course is usually only step one in learning. Teaching composition is another trendy topic. I don't doubt its importance at some developmental level but I want to know whether it is a tool or an objective in life-long learning. Are we helping students understand how today's guitar players can churn out hundreds of compositions and perhaps make a comfortable living? Does it contribute to problem-solving or is much of it trial-and-error with no agreed upon acceptable solution(s) to the question? With any

number of trendy topics for philosophers and researchers, music education is no more secure in the curriculum today than it was 50 years ago.

I assume that those interested in supporting music education want students to learn something in music classes and want each year to build upon the previous experiences. Keith Swanwick (Swanwick; Tilmann, 1986; Swanwick, 2011) and Edwin Gordon (2012) are two researchers who have advanced developmental learning theories. These should be subjected to longitudinal research, as short term projects cannot address the issues. Teacher evaluation can proceed if there is agreement on what students can and should learn with effective teachers. The public has some recognition of competence when ensembles win at contests or elementary school groups perform. If we had been teaching well all year, members of the audience would be able to tell whether the school choir was performing as well as expected given the resources including the opportunity to learn. An important topic for research is opportunity to learn. Every important topic has a cost that the public should understand – if all students should be able to read and perform three-part music in three styles, how much instructional time and resources must be devoted to that topic to insure that 80% of the students are proficient. What about the remaining 20%? Once one falls behind in a skill, remedial instruction is necessary.

Early childhood education is a trendy topic for policy makers. In the U.S., powerful factions want to devote enormous resources to provide all children with early learning experiences; in effect, the public school is expanded by a year or two probably financed by federal or private money to avoid usurping local control. There is no valid research on the long-term benefits nor any measurable outcomes from Head Start, Early Start, Title I, or other early experiences. Music experiences with this population, however, are more promising and much can be accomplished with skilled teaching and developmentally appropriate goals. Learning music might be like learning a second language, an early start is critical. An important research project that incorporates some of these ideas would be curriculum research. The U.S. has had spurts of interest in “up-to-date” curricula since Sputnik. Many ideas were tried such as new math and quickly abandoned. In music, Bennett Reimer in the 1980s developed a curriculum for a text book publisher (Silver-Burdett) but it too was abandoned when teachers were more interested in materials for holidays or Black history month than in making systematic progress toward important musical goals.

The Bill and Melina Gates support for developing measures of teacher effectiveness should be of interest to music researchers. After spending millions of dollars, the recommendation is that about 25-35% of a teacher’s effectiveness “score” should be based upon what intended learnings were attained. They used state tests in the core subjects. We have no comparable measures. The MET project found that student opinion as measured by the *Tripod Student Perception Scale* (Ferguson, 2013) as to what constitutes good teaching was reasonably accurate and might consist of 25% of a teacher’s competence score. It appears, at this time, than even the youngest students can provide reliable ratings (opinions?) of teacher competence.

Valid research in music is needed on the issues raised by Bill and Melinda Gates’ efforts to measure teacher effectiveness. I suggest that required and elective music experiences and

objectives differ on many research topics including student surveys, administrator and peer observations, and outcome measures.

Attempting to have common curriculum goals, K-12 seems to me to be a fool's errand. There is a learning sequence or sequences and although the taxonomies were not developed or "order" instruction, they do provide insights into important concepts for understanding. Having a student repeat a rhythm pattern may be a first grade outcome but inappropriate at other grade levels.

The Gates project incorporated trained administrator observation using the Charlotte Danielson framework (Danielson, 2012). Danielson may not be the best one for music – CLASS and other observation systems need to be researched. Without valid observation strategies, qualitative research is nearly impossible.

What if we took our research cues from musicians?

All countries accept intelligent listening as a curricular goal – listening with understanding. Some countries appear to have more simplistic goals than others. The professional music community has taken the lead using contemporary music with performances by artists, major symphonies and conservatory ensembles. Orchestras are criticized by music critics when they are too timid in programming the music of excellent contemporary composers. Students need to learn, in school, how to listen intelligently to the music of George Crumb, Gyorgy Ligeti, John Adams, Elliot Carter, Osvaldo Golijov, Pauline Oliveros – an almost endless list of music by composers they can be expected to encounter as educated adults. I posit that this music is more lasting than much of that student suggested music in some of today's curricula.

Research trends are not fruitful if we can't answer a fundamental question, what one competency must all children studying music have to be considered musically educated? Without clear goals, establishing music education policy is not possible. Is there agreement among Brazilian music teachers of how to identify Brazilians who have had a good education in music? I found the topics in your research journal intriguing but many didn't dig deeply into the topic. I attribute my lack of understanding to the language problem. If there is international agreement that well educated adults can think deeply and thoughtfully about important issues, our responsibility is to model thoughtful research on priority topics.

Music education doctoral programs in the U.S. have as their primary purpose the educating of college teachers. There is often an emphasis on the ability to read and understand research. A few of our institutions are in a position to educate researchers but this would be a small population and "numbers" count. How to separate the two populations in the same institution? Arthur Levine (2005) at Teachers College, Columbia University, suggested that the Ed.D or a new degree designate college teachers and/or school administrators with a PhD or new degree reserved for those destined for research. The DA was established to educate community college teachers but it exists in only two institutions. I recall when the University of North Carolina at Greensboro thought they were not competitive with an Ed.D in music education and they changed to granting the PhD with no change in their curriculum.

There is an expectation at all institutions that graduates will publish. There are no accepted standards as to what constitutes doctoral level research; describing teaching ventures in their own work or observing public school ventures seems to some to be adequate. These reports are fun to read but do not advance the profession. Researchers in the U.S. are individuals who are interested in a topic and willing to devote their personal time to that topic. Only a few teachers conduct research that results in texts; Kenneth Phillips (Phillips, 2013; Phillips; Doneski, 2011) in singing is one who has found this outlet, as have Gary McPherson (2006) in Australia and Wilfried Gruhn (Gruhn; Rauscher, 2008; Gruhn, 2011) in Germany.

There appears to be a gap between educators and music educators as to the future. Publications on the arts that appear in education journals are focused on integrating the arts or perhaps using the arts in multicultural education. In 2013, *Harvard Educational Review* devoted issue 83(1) to Expanding our Vision for the Arts in Education with some 49 authors' names on the cover. The one article on music was focused on multicultural uses and written by Louise Pascale¹⁹ (p. 127-134) "who studies the impact and effectiveness of arts integration as an instructional strategy and powerful vehicle for increasing and deepening student learning" (p. 271). The most powerful article in that issue was an arts advocacy article by Gaztambide-Fernandez (2013) entitled Why the arts don't do anything: Toward a new vision for cultural production in education. It triggered a response by John Abodeely of the Kennedy Center for the Arts; Ken Cole of the National guild for Community Arts Education, Janna Graham of the Serpentine Gallery, Ayanna Hudson director of arts education for NEA, and Carmen Morsch of the Zurich University of the Arts (2013). In his rejoinder, the suggestion is made that we drop the term arts and use cultural practice. The exchange is exciting and should be read in its entirety by advocates for the arts. Other than this exchange, one has to conclude that visual arts educators continue to take the lead on policy issues.

Phi Delta Kappa and the Gallup polling organization conduct annual surveys of education issues. Polling has not touched upon the arts for several years but what we know about public opinion is that the public is almost universally in favor of the idea that music should be available for all students. Yes, when the importance of subjects is ranked, music and visual art rank at the bottom. It is unfortunate when our good scholars devote their time conducting research to justify the arts. The arts are not in danger of being devalued. I have listed many recent publications supported by arts advocates and NGOs. Arts Education Partnership, Americans for the Arts, the President's Committee on the Arts and Humanities, and the National Endowment of the Arts will continue their excellent work. In addition, foundations such as Getty, Walton, Ford, Rockefeller, RAND and wealthy individuals will continue to be supportive. The problem is when the defense is "The arts do this? Where to make students smarter, more imagined, socially engaged or whatever. The public and educators understand what it means to have a well-rounded education. The issue is in what format students obtain a valid music education. The officers of the national

19. Nota do editor: Pascale, L. The role of music in education: forming cultural identity and making cross-cultural connections. *Harvard Educational Review*, v. 83, n. 1, p. 127-134, Spring 2013.

conference of music educators in the U.S. must spend their time advocating; their support comes from the music industry as well as from worried teachers who pick up on the latest rumor. Every time and in every situation where music has been cut from the curriculum, when money comes available, music comes back stronger than ever. There are also parent groups who continue the support necessary.

The public likes the idea of standards, as do most teachers in core subjects – partially because of the mobility of the US population but also because there is a belief that the schools are not sufficiently challenging. One can understand under these circumstances the expenditure of resources to have the arts included with standards. Physical education is usually not included with the standards yet its curricular issues are closely related to those in the arts. Music has to share budget and time resources with visual arts, theatre, dance, and media, while physical education is a stand-alone subject. Advocacy is a broad brush approach to education. Innovation in research depends upon consensus on priorities. With priorities, one can educate oneself or take courses to become competent. Both music itself and the teaching of music are complex; one doesn't just "do" music. One has to study, learn, and practice. The scientist studying cloning moves from easy to difficult. There are multiple possibilities to organize instruction in music education, old to new, obvious to subtle, simple to complex, known to unknown, etc. One walks before one runs.

The research knowledge that is critical is knowledge that connects music with a democratic culture. Paul Woodford (2005) addresses some of these issues. We also need knowledge about what students already know or will learn on their own. School music programs undermine democracy when they rely on movie, commercial, and educational music that is intended primarily as entertainment and advertising. The music educator is a moral model – teaching ideas and concepts that contribute positively to the desired culture to which the student is to contribute. Woodford argues that it would be irresponsible to continue sending music education graduates into the world with musical skills, and perhaps a smattering of knowledge of music theory and history, and yet have no idea of their perceptions, tastes, values, and understandings of history and current social and political realities, many of which have been deliberately shaped by other people, organizations, and institutions for their own ends (Woodford, 2010).

Woodford's point relates to my concern that music education researchers be able to interpret their data which was my opening point. Interpretation requires a broad education, both formal and self-education. The music educator who can only "talk-shop" in informal conversations is not a promising researcher with interpretive competencies. The thinking equipment needed by researchers is not part of music education doctoral education. Researchers and the research community need to build trust among and with the teachers. This will not be easy as teachers are not accustomed to seeking answers to issues in music learning from research and education research has long been demeaned by scholars in other fields; many do not even think that Education is a discipline. This is compounded because 2014 is also a time of lack of trust in most civic employees. Those of us in the research community have contributed to the confusion. We know that many of the claims of those advocating for music education are exaggerated but one wants to be supportive of "friends". Advocates for the arts suggest that students will remain

in school because the “learning style” in the arts differs from that of math when we know there is no adequate evidence base to justify incorporating learning styles into general educational practice – they don’t exist (Hattie; Yates (2014) and reports of the American Association of Psychology Science).

All research should come with cautions, error estimates, and reports on replications of that particular research problem. Interpretation of qualitative research requires individuals with broad backgrounds in general education---not just in ideologies in education. Qualitative research will be aided by replication. The research of the Melinda and Bill Gates MET project has alerted us to the error in observation. I am not singling out qualitative research, only including it among the types or research requiring revision and better thinking. The errors in science research, economic research, and educational research have recently come to the public’s attention. A foundation has given three million dollars to initiate a center that will review research findings in all fields that require replication. The cover of Volume 49, issue 8858 of the *Economist* (2013) focused on the increasing errors in science research. We also have a public that is not yet convinced of scientific findings of global warming, evolution, and other well-researched topics. It is not surprising that the public honestly believes that with music, there are only some with a sufficient talent for them to learn to sing.

Maybe music education has a taxonomy and priority of our research should be given to researching topics that will make MUSIC teaching and learning more successful with a greater number of students. Effect size is an important concept. Having a research effect in music, not in education, is more important.

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