Forum: Students with Disabilities in the String Classroom: An Integrative Review

Abstract
There is limited information on students with disabilities in the string classroom. The aim of this integrative review was to synthesize the existing knowledge and trends regarding educational practices for students with disabilities in the string or orchestra classroom. A total of 20 articles met inclusion criteria. The majority of available information consisted of expert opinion, with no true experimental designs found on string/orchestral education for students with disabilities. The analysis revealed that having a disability does not prevent a child from achieving on a string instrument, although barriers and challenges to participation do exist. Furthermore, the review showed that investigations specifically targeting string educators or teaching strategies in the string classroom are limited at best. More research is needed to better understand how students with disabilities can be effectively included in the string classroom.

Keywords
orchestra, strings, education, disabilities, inclusion, music

The Individuals with Disabilities Education Act (IDEA), which was enacted in 1975, mandates children ages 3-21 with disabilities receive a free and appropriate public education (NICHEY, 2012). Since its inception, the number of students with disabilities served in United States public schools has increased from 8.3% in 1976-77 to 13.8% in 2004-05, with a slight drop to 13.1% in 2009-10 (U. S. Department of Education, 2012). Due to this inclusive legislation many students now attend “non-traditional academic classes such as music, art and physical education with their non-disabled peers, as an integration

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2 This Forum article is based on the invited address presented by the authors at the 2014 ASTA National Conference in Louisville, KY.

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experience” (Simeonsson, Carlson, Huntington, McMillen, & Brent, 2001, p. 50). Unfortunately there are often barriers to involvement in these non-traditional academic areas (Simeonsson et al., 2001). At the same time, teachers have the responsibility to ensure a proper music education for all students (Mazur, 2004).

The desire to provide music education for all was an important concept in early 20th century music education. Early leaders in the Music Supervisors National Conference (now NAfME: National Association for Music Education) advocated for the inclusion of music as a core subject, and its leaders promoted efforts to address inequalities in music education for underserved populations (Hoffman, 2011). By the 1940’s and 50’s committees were established within the organization focusing specifically on music for exceptional children (Mark, 2008). Today, music has been recognized as an important educational aspect for all students, even those with multiple, severe, or profound disabilities (Ockelford, Welch, & Zimmerman, 2002). In fact, evidence suggests that students with disabilities can and do achieve in music education classes at levels similar to their peers who are typically developing (Hoffman, 2011).

**Problem Identification and Purpose**
In spite of the progress in music education for students with disabilities, inequalities still exist. Students with disabilities are frequently not included in music classes at rates comparable to their typically developing peers (Hoffman, 2011). Furthermore, students are often not included in ensemble programs at the same rate that they are included in general music courses (Frisque, Niebur, & Humphreys, 1994; Zdzinski, 2001). The purpose of this integrative review was to critically analyze the existing knowledge and trends regarding educational practices for students with disabilities in the string or orchestra classroom. Specifically, educational practices geared toward children with disabilities were examined.

**Method**

**Integrative Review Framework**
In order to best synthesize the literature available on string instruction for children with special needs, an integrative review approach was chosen. An integrative review is a broad research review method that allows for inclusion of diverse methodologies including both experimental and non-experimental studies. Integrative reviews involve a more comprehensive approach than the better-known systematic review format, and are appropriate when multiple types of literature are to be reviewed (Haslbeck, 2012). The current review was conducted using a framework developed by Whittemore and Knafl (2005). The process outlined in this framework was based on Cooper’s (1982; 1998) research review process but modified specifically for integrative reviews. The review process was conducted in five stages: (a) problem identification, (b) literature search, (c) data evaluation, (d) data analysis, and (e) presentation.
Definitions
In order to clarify the provision of services for children with disabilities in the public school setting, IDEA has defined disability using a categorical approach. In total there are 14 categories, with definitions for specific disability terms outlined within each category. Category examples include autism, developmental delay, and intellectual disability, among others (NICHY, 2012). For the purpose of this review, disability was defined according to the IDEA definition. String education was defined as orchestral or guitar classes or ensembles. Inclusion was defined as placing a child with disabilities “to the maximum extent appropriate, in the school and classroom he or she would otherwise attend.” [Rogers, 1993, p. 1].

Databases and Search Strategy
We obtained studies primarily through a comprehensive computer-assisted search of selected databases (see Table 1).

Table 1
Databases Searched

<table>
<thead>
<tr>
<th>Database name</th>
<th>Search results</th>
<th>Potentially relevant</th>
<th>Articles included</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProQuest Education</td>
<td>1,530</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>ERIC</td>
<td>212</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Identifies total number of articles included from a specific source. Some articles may have been found by searching databases and by hand searching journals. These duplicates were eliminated in the final count of included articles.

This search was enhanced by hand searching the table of contents of relevant music journals (see Table 2).