Senior Project Proposal

HETEROGENEOUS STRING CLASSES AND
ANALYZING TECHNICAL DEVELOPMENT

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Abstract

This senior project is a research project on the developmental gap that exists between junior high level repertoire which causes cello and bass to be left behind in the developmental process of string playing because much of the string repertoire does not offer the same level of challenge and technique that is offered to the violins and violas.
Chapter I Introduction

The Problem

Within the normal progression of junior high level repertoire, cellos and basses are left behind in the developmental process of string playing because much of the string repertoire does not offer the same level of challenge and technique that is offered to the violins and violas.

The Purpose

The purpose of this senior project is to identify the developmental gap between upper and lower strings and to offer a solution to this gap by teaching an original composition written for a junior high level orchestra that contains shared melodic content, equal level of challenge, and similar technique for all sections.

The community

The sample study group Weber State University Summer Strings program operates on the main campus of Weber State and the classes are held in the Browning Center located in Ogden, Utah. This program is open to third graders up through twelfth graders including a small number of novice adults. Ogden is the largest of 14 cities located in Weber County along the Wasatch Front. It has a population of 82,702 with a median age of 28.6 years and an average household of 2.72 persons. Population for the State of Utah sits at over 2.5 million, with well over half of the State's population residing along the Wasatch Front.

Ethnic and racial minorities make up over 20% of Ogden's population, with the largest minority group being Hispanic, followed by African Americans, Asians, American Indian/Alaska Native, and Native Hawaiian or other Pacific Islander (Ogden City, 2011)
**Historical demographic data for the WSU Summer Strings**

In 2010 Summer String registrations totaled forty-three students: Twenty-six were female and seventeen were male. Students registering for classes indicated their main instrument as bass ($n = 3$), cello ($n = 9$), viola ($n = 3$), violin ($n = 25$), and 3 students who play more than one instrument. This organization includes a wide spread of students from Ogden and the surrounding cities. When listing the student’s home city responses included: Clearfield, Farmington, Far West, Huntsville, Kaysville, Layton, Mountain Green, North Ogden, Ogden, Pleasant View, Roy, South Ogden, and South Weber. The average grade level of students in the program was 7th grade. The average age was 13.

**The Writers Role**

The author has been playing the cello since age twelve. His string playing career began in the fifth grade by learning the violin. The next year he continued with strings but decided cello was a better fit. He studied cello at Mound Fort Middle School and Ben Lomond High School. Since entering college, he has performed with the Weber State Symphony Orchestra, the New American Philharmonic, and with the cello quartet called Espero Cello Quartet. He has performed in professional recording studios and is featured on multiple tracks on iTunes. He was a teacher for the Weber State University String Project for four years and has now completed his second year conducting the Lincoln Youth Chamber Orchestra. He is currently working on his bachelor’s degree in Music Education at Weber State University.
Chapter II: Study of the Problem

The Problem Description

Within the normal progression of junior high level repertoire, cello and bass are left behind in the developmental process of string playing because much of the string repertoire does not offer the same level of challenge and technique that is offered to the violins and violas.

Problem Documentation

The author has noticed throughout his performing and teaching experience that Junior High level repertoire does not teach or challenge the cellos and basses at the same level as the violins and violas. The author can think of multiple examples where this holds true, but would like to include one personal experience from his experience student teaching.

The current method books used by the Davis School District are “Essential Elements 2000” (Allen, Gillespie, Hayes, 2004). The author feels that the books are very complete when it comes to including exercises for concepts that would normally have to be supplemented like scales and rhythm exercises. The book recommends that when learning duets, violins should play the melody for the “fullest sound” while cellos and basses play supporting lines. This is an example of how cellos and basses may be left behind developmentally because supporting lines tend to be less challenging and less technical.

Literature Review

In the literature review the author will study examples of Jr. High repertoire that offer an even level of technical material for equal development between upper strings and lower strings. Here are the following examples:
Cello Song

*Cello Song* (Daniels, 1999) is a good example of Jr. High level repertoire where the Cellos have melody throughout and shift to 2nd position. 1st violins use 2nd and 3rd position and basses also have opportunities to shift. The author likes how this piece gives the melody to the cellos the entire time. It serves as a good cello spotlight piece. (See appendix C)

Retro Metro Man

*Retro metro man* (Sharp, 2006) is written in the jazz style of the late 50s and early 60s. With challenging rhythms, this work serves as a great lower section spotlight, as both the cello and bass section receive “feature sections” and bass gets a chance show off with a well written solo.

Toro, El

*Toro, El* (Brubaker, 2003) is written in a bold Spanish style, this work includes solos for violin and cello. All sections trade off content in the strong Latin ¾ rhythms. With driving energy, this piece is challenging and exciting for all sections.

Causative analysis

There are two main reasons the author feels that cellos and basses do not receive the same technical development as the violins and violas. First, the sonority of the strings support handing most of the melodic content to the violins and even the violas and letting the cellos and basses cover the harmony. And second, in classroom instruction, conductors will focus on upper strings technical development because cellos and basses represent the “minority” of string players.

There are many ways for students to achieve technical proficiency on cello and bass. The author, for purposes of this study, will be focusing on teaching a personally written composition designed to target technical development of the cellos and basses.
Chapter III: Outcomes and Analysis

Goals

The authors’ personal philosophy about the lower string instruments receiving less technical development than upper strings is one that comes from personal experience. One piece that he remembers learning was *Air on the G string* by J. S. Bach. (Bach, 1723) This piece, though pleasant to listen to, maintains mostly quarter notes for the cello and bass, and the upper strings are given the challenging rhythms, bowings, and active melodies. (See Appendix A)

Not all music from the authors’ secondary education experience catered to upper strings only. On occasion, a well-written piece would be given to the orchestra to learn. One example of a piece that contains a more shared melody from the author’s high school experience was a piece called “Blues for Oaktown” (Anger, 1992). This piece remains a very pivotal part of the authors’ technical development. As first chair cellist, he can remember how hard he had to practice and work to be able to perform the solo part. Within this piece there is a shared content for all strings to be able to develop technically and musically.

As a result of this experience and others like it, the author is instigating a project where students will learn a piece of music that caters equally to all instruments and players. The composition is a personal composition written by the author. The goals of this learning experience are as follows:

1. To determine the gap in technical and musical development between upper strings and lower strings.
2. To Teach the composition
Expected Outcomes and Measurements

To measure goal number one: Students will be recorded at the beginning of the project and again at the end. The recordings will show how students have improved musically and technically on playing test material. (See Appendix E) These will be graded using a rubric. (See Appendix B)

To measure goal number two: Students will learn and perform a composition that teaches musical techniques and qualities to every instrument in the orchestra evenly.

The author expects students to improve from pre-test to post test and to be evenly challenged as they learn a musical composition together.

Analysis

Data for learning this composition will be shown in the following way:

The author will record and score students’ pre-test and post-test performances. It is the author’s belief that these scores will serve to analyze two things: first, the violins and violas will score higher on the pre-test than cellos and basses. And Second, Cellos and basses will have improved from having learned and performed specific material developed especially for them.
Chapter IV: Solution Strategy

Problem Description

Within the normal progression of junior high level repertoire, cello and bass are left behind in the developmental process of string playing because much of the string repertoire does not offer the same level of challenge and technique that is offered to the violins and violas.

Discussion

During the authors time of building this project proposal he had a meeting with Dr. Stewart (an advisor for the secondary education department at WSU). She asked for a summary of what the author’s senior project was going to cover. When the Author finished outlining his proposal to her she exclaimed, “That is why my son never played in Junior High, and eventually quit. The music was simply too boring for him at that level.” (Stewart, 2011)

Dr. Stewart was not the only faculty member to agree with the author. In the fall of 2010 in a meeting with Dr. Uzur, he would also agree to the “boring” cello parts offered to students at this level in the classroom orchestra setting (Uzur, 2010)

Calendar

April

22\textsuperscript{nd} - Proposal finalized

May

Composition approved by faculty committee

June

Pre-test

Begin rehearsal

Analysis of Pre-test data
Post-test

Concert

July

Analysis posttest data

August

5\textsuperscript{th} - Final version of proposal submitted to faculty committee

To include:

Chapter V complete

All pre and post-test recording (on CD)

All pre and post-test grading data (printed)

Program from performance
Chapter V: Results and Recommendations

The Problem

Within the normal progression of junior high level repertoire, cello and bass are left behind in the developmental process of string playing because much of the string repertoire does not offer the same level of challenge and technique that is offered to the violins and violas.

Expected Outcomes and Measured Objectives

The author had a group of twenty-two students agreed to be apart of the project of those there were: bass (n = 1), cello (n = 6), viola (n = 2), violin (n = 12). All students were recorded for both the pre and posttests except for one cello that missed the posttest.

The pre-test recording was taken on the second day of nine meetings for the summer class. The music was handed out following the pre-test and rehearsed every rehearsal until the concert. The post-test was given on the last rehearsal day, which gave the students eight total rehearsals on the music, and twenty days from when they were given the music till the concert date.

During the course of rehearsals a significant event happened that the author believes strongly supports his hypothesis. While learning a jazz piece in the intermediate group, it was eventually decided to drop the piece for the cellos would not be able to perform it well for the concert. The cellos themselves agreed to this fact, in contrast the violins expressed how disappointed they were to lose this piece as they had obviously put in more practice time into ensuring they could perform it while the cellos did not.

This is an example of how the cellos at that age have settled into a pattern of only wishing to play things that keep them in the background and are very easily learned; while the violins were eager to learn and accomplish a challenging piece.
The results from the pre-and post-test show that even though the violins and violas did not score significantly higher on the pre-test they averaged five points higher on the post test. (See Appendix F) This data means that even when giving music that attempts to give more shared melodic content the cellos and basses are still scoring lower than the violins violas over time. These test scores support that the author’s first goal was met. A gap was identified between the two sections. Goal two was also met, as the group was able to learn, play, and perform his composition for their concert. (See Appendix G)

Discussion

The author feels like this study was a very successful one. The rehearsals, and testing all went very fluidly, and the author was grateful with those students that were more than happy to be included in the study. The author also could not have completed the testing or the rehearsal portion without the help for his fellow teachers in the Summer Strings program and would like to thank them for being willing to control traffic on the days when recording was taking place, and allowing the time to work through difficult sections in the authors piece. Finally a special thanks to Gabrielle Cox who masterfully performed the piano part and made final edits to it.

Recommendation, Implications for Further Study, and Plans for Dissemination

The author recommends the following amendments if the project were to be repeated: more data collecting to include: those who study privately, length of time each person has been paying primary instrument and other performance based milestones that would impact student performance. The second recommendation is have more students in each of the groups except violins. Just as I had stated earlier, violin is a more popular instrument, and this leads to a greater population in that instrument. The author still feels like he collected a good sample from the
group that he did have, but for instance there was only one bass. The author would have liked more students to create a larger sample group to support the concluding data. The third recommendation would be to give more time for students to review material before being given the pre-test. All of the students were forced to sight-read the pre-test test. Not all students are good at this skill set, which has to be developed differently than music reading and performing. The fourth recommendation is to have more people grade test scores. The data could be supported more by removing people with a bias, i.e. the author who was the sole grader for the scores in this study. He tried to remain as fair and as impartial as possible, but more data from outside sources would remove that risk.

This study is also something the author feels would be better done over a greater time. Most students in the program are use to having a greater amount time to learn music in the classroom setting. The author feels that by giving more time in more of their natural learning pattern, more improvement could have been shown. The author also feels that conducting a similar test first on a more “traditional” piece (one that supports the violins and violas with the melody, and the bass and cellos with supporting roles), and then give a test on a piece giving a more evenly shared melody and comparing those results would give a more accurate picture of improvement.

Implications for further study include introducing more repertoire that challenges bass and cellos over time. Further studies should include data that found a measurable way to close this gap. Even though the author identified this gap there is no way of knowing how much improvement was made by using the author’s composition. This is why further studies should include if the students did end up making those improvements over time, and the material used to get there.
This project is in partial fulfillment of a Music Education Instrumental degree at Weber State University. The committee reviewing this project will include: Thomas Priest, Viktor Uzur, Michael Palumbo, Mark Maxson, and Sara Silva. They will review the goals and objectives of this project and the author will complete the final analysis when the project has ended.
References


Stewart, P. (personal communication, March, 25, 2011)


Uzur, V. (personal communication, October, 20, 2010)
Appendix A

AIR ON THE G STRING

Largo (d = 60)

Opt. 1
VIOLINS

2

3

VIOLA

CELO

STRING BASS

Arranged by DONALD RIGGIO

By J.S. BACH

36324

mf cresc.

mp mpf

mf

mf

mf

mf

mf

mf

mf

mf

mf

mf

mf
Appendix B

**GRADING SHEET FOR MUSIC PERFORMANCE**

Student number: _______________________________

Grader number: ________________________________

Instructions:
Place and x where you feel the performance more accurately lies in the grading scale. Please use your first instincts, and try not change an answer once you have made your mark.

**Tempo** –

<table>
<thead>
<tr>
<th>Performed under tempo</th>
<th>Performed at tempo</th>
<th>Performed over tempo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intonation** –

<table>
<thead>
<tr>
<th>All notes out of tune</th>
<th>Most notes out of tune</th>
<th>More notes out of tune than in tune</th>
<th>Equal value of in tune and out of tune notes</th>
<th>More in tune than out of tune</th>
<th>Most notes in tune</th>
<th>No noticeable intonation problems</th>
</tr>
</thead>
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</table>

**Accuracy of rhythms** –

<table>
<thead>
<tr>
<th>All rhythms performed incorrectly</th>
<th>Most rhythms performed incorrectly</th>
<th>More notes played rhythmically incorrect than correct</th>
<th>Equal value of incorrect rhythms and correct rhythms</th>
<th>More notes played rhythmically correct than incorrect</th>
<th>Most rhythms performed correctly</th>
<th>All rhythms performed correctly</th>
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<tbody>
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</table>

**Dynamics** –

<table>
<thead>
<tr>
<th>All dynamics performed incorrectly</th>
<th>Most dynamics performed incorrectly</th>
<th>More dynamics played incorrect than correct</th>
<th>Equal value of incorrect dynamics and correct dynamics</th>
<th>More dynamics played correct than incorrect</th>
<th>Most dynamics performed correctly</th>
<th>All dynamics performed correctly</th>
</tr>
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</tbody>
</table>
### Tone –

<table>
<thead>
<tr>
<th></th>
<th>Not clear tone</th>
<th>Semi-Clear tone with a lot of errors throughout entire performance</th>
<th>Clear even tone with few errors throughout entire performance</th>
<th>Clear even tone with maintained throughout entire performance</th>
</tr>
</thead>
</table>

### Style and articulation –

<table>
<thead>
<tr>
<th></th>
<th>Performance flat with no noticeable articulation</th>
<th>Performed semi- correctly in style with few articulation</th>
<th>Performed correctly in style with most articulation</th>
<th>Performed correctly in style with all articulation</th>
</tr>
</thead>
</table>
Conductor Score

Appendix C

Cello Song
for String Orchestra

Performance time: 2:30

M. L. Daniels
Appendix D

Parent letter to gain approval of participation:

Dear parent or guardian,

My name is Adam Smith I am writing to ask your permission to have your student’s cooperation in a research project I am currently working on in partial completion of my Music Education Instrumental degree here at Weber State University. I am in need of students who would be willing to participate in two after class sessions; where I will conduct a brief pre-test and post-test on each occasion respectively. This in no way affects the student’s progress in summer strings and I appreciate your cooperation. Dates of the sessions are forthcoming.

Adam Smith

Student name: ________________________________________________

Parent signature: ______________________________________________
Appendix E

Pre and posttest example:
Appendix F

Graph of pre and posttest scores:

This graph represents a total average of pre and posttest scores and the difference in overall improvement from the pretest to the posttest.
Appendix G

Program from concert:

Combined Advanced and Intermediate Orchestras
Saturday Morning Symphony
Written and Conducted by Chuck Thompson

Advanced Orchestra

1st Violin
Romney Cox
Micah Masson
Macenzie Ross
Jesse Shupe

2nd Violin
Samuel Gercov
Marty Davies
Audrey Ghiby
Brandy Moreland

Viola
Auriana Byrd
Amande Dorchbach

Cello
Tucker Banz
Gaire Mortenson
Jessica Watson

Bass
Ashley Byrd

Beauty and the Beast
Fantasia Impresario

Lyrics by Howard Ashman, Music by Alan Menken
Arr. By Calvin Custer
Solo: Hee Newbold

Special Thanks to:
- The Ogden City School District
- The Ogden Amphitheater for the use of this beautiful facility
- WSU Department of Performing Arts
- WSU College of Arts and Humanities
- Weber County Recreation, Arts, Museums & Parks (R.A.M.P.) who provide funding for Summer Strings
- To you and your continued support of the arts

OGDEN CITY ARTS

N5PC
r.a.m.p.
STRING PROJECT

Bonneville Youth Orchestra

Weber State University
Department of Performing Arts
The signatures below indicate the music educations candidate’s senior project proposal has been approved and may proceed following the guidelines above:

______________________________
Thomas Priest (Director of Music Education)

______________________________
Viktor Uzur (Cello Professor/Composer)

______________________________
Michael Palumbo (Area Head/Viola Professor)

______________________________
Mark Maxson (Music Technology Specialist)

______________________________
Sara Silva (Davis School District Teacher)